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Study on The Teaching Methods of Foreign Language Education in Sino-Foreign Cooperative Running Schools

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Abstract

Foreign language ability has become one of the elements of individual competitiveness in the context of globalization. This paper discusses the application of teaching methods, problems and solutions of Sino-foreign cooperative schools under the background of foreign language education. How to effectively integrate the educational concepts and methods of both sides has become a key issue for the rapid development of Sino-foreign cooperative school programs. This paper on the importance of foreign language education, the present situation of the development of Chinese-foreign cooperation in running schools is analyzed, analyze the cultural differences behind these problems, the lack of education policy guidance, reveals the cooperation in the process of teaching content localization, teaching method innovation, teacher training and support, etc. Put forward the countermeasures and suggestions to promote the effective implementation of foreign language education.



Full Text Article



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Keywords: Foreign language education; Chinese-foreign cooperation in running schools; teaching methods; cross-cultural teaching and curriculum development

Introduction

Proficient in a foreign language can not only make the communication smoother, but also enable the individual to get more development opportunities on the global stage, broaden the vision and deepen the cognition and acceptance of multicultural, so that the individual can get all-round growth. For a country, improving foreign language ability is an effective way to strengthen soft

power. In the personal career growth path, mastering a foreign language is a key factor to measure the ability of job seekers, and in the transnational trade, the communication master proficient in multiple foreign languages is also highly respected. For example, employees in a multinational company must communicate efficiently with colleagues and customers of different nationalities, when mastering a foreign language becomes essential because it helps to communicate efficiently with people from different language backgrounds. Proficient in a foreign language can not only enhance the work efficiency, but also cope more freely in a foreign culture, promoting the formation of a solid international cooperation bond. Foreign language education plays an indispensable role in enhancing the national soft power, especially at the national level. The efficiency of a countrys cultural communication and communication with the outside world is often recognized as an important measure of its international status and global role. The promotion of mother tongue education not only strengthens the peoples sense of belonging to the country, but also contributes to the communication and diffusion of culture, thus enhancing the reputation and charm of the country in the world. For example, international Chinese language promotion programs such as "Confucius Institute" are being launched in China, aiming to enable people around the world to have a deeper understanding of Chinese culture by learning the Chinese language and Chinese cultural heritage, and then enhance Chinas influence on the global scale.

Development status of Sino-foreign cooperative school-running programs

The Sino-foreign cooperative education program provides students with different learning directions, increases the diversity of global educational structure, and greatly expands students vision and skills.

By integrating educational concepts, curriculum materials, advanced means and practical operations, Sino-foreign cooperative school programs create a global atmosphere for students to study for further study^[1]. For example, some programs adopt the teaching structure and methods of overseas universities, enabling students to access the worlds top educational resources such as the UVGR program jointly launched by Stanford University and Tsinghua University, giving students the opportunity to communicate directly with the worlds top scholars and thus improving their academic research capabilities.

By sharing teaching resources, technical facilities and teacher teams, students can have access to diversified learning materials, and obtain foreign learning concepts and learning equipment^[2]under certain conditions. Cooperation projects play a key role in promoting cultural exchanges and enhancing mutual understanding in the field of Chinese and foreign education. Through holding of international cultural festivals, academic seminars and student exchanges, we not only enhance students understanding and respect for various cultures, but also promote the training of cross-cultural exchange ability. In the project jointly conducted by New York University and a famous Chinese university, the teaching concept of cultural diversity is particularly highlighted, whose goal is to enable students to understand the common values and differences of human beings in the context of globalization.

Cultural differences, conflicts of teaching ideas, resource utilization efficiency and other problems are also important reasons for the remarkable achievements in the rapid development of Sino-foreign cooperative school programs. But it is these challenges that also provide the impetus

for further innovation and optimization for projects to promote education cooperation in a deeper and more efficient path. In the future, Sino-foreign cooperative school programs are expected to make greater breakthroughs in resource sharing, teaching methods innovation, cross-cultural education and other aspects, bringing more possibilities and values to the global education field. With the progress of technology and the increase of social demand for international talents,^[3]

Application challenges of educational methods in Sino-foreign cooperation in running schools

In the sino-foreign cooperative school program, the differences between the two parties in teaching concepts, teaching methods, evaluation standards and other aspects are the main aspects of the application of educational methods. These differences are not limited to the surface of the teaching strategies, but go deep into the curriculum design, teacher training, student assessment and other links, which puts forward a severe test for the effective integration of foreign language education methods. The difference of teaching ideas is the first factor that causes the disagreement. The educational concepts between China and western countries are fundamentally different. Chinas education system emphasizes collectivism, the authority of teacher-student relationship and the inheritance of knowledge; Western education advocates individualism and emphasizes students active inquiry and speculation. For example, in terms of the interactive way of classroom teaching, China is more inclined to the student-centered group discussion method, while western countries are more inclined to teachers guidance and knowledge transmission. This difference in thinking and ideas, in practice, may cause a conflict in teaching methods, making it difficult to reach the balance.

Different teaching strategies will also affect the effect of foreign language teaching. While Chinese educators may tend to follow the old teaching and practice model, teachers from the West tend to adopt teaching strategies such as project-oriented learning, example discussion, or edutainment. For example, in the process of guiding the interpretation of Korean texts, teachers from the West may tend to use in-depth analysis strategies to encourage students to explore the complex meaning behind the article. In contrast, Chinese teachers are more likely to focus on vocabulary expansion and grammar knowledge. Such differences create the need for careful curriculum planning to ensure that learners enjoy the best learning experience across a range of various teaching methods.

One major challenge in cooperative schools is the inconsistency of assessment standards. Compared with China, the western education system is more inclined to use a series of comprehensive evaluation methods to assess students academic performance. Because students in the cross education system transition may be confused about the assessment mode change and difficult to adapt, so they may produce certain pressure and do not adapt to the situation, in Chinese education model, for example, because students to frequent examination formed a certain psychological dependence, so in the face of western university term papers and project report may feel certain pressure and difficult to adapt, this is also a typical difficulty in the transition across the education system.

To meet these challenges, it is necessary to enhance the interaction and cultivation of different cultural and educational concepts. It can be realized by regularly holding of public courses and exchange meetings, so that teachers have the opportunity to deeply explore the educational

background and concepts of different cultures, and then combine the advantages of both sides to optimize the teaching effect. Timely adjust the course content to make the course content more close to the new needs ^[4]. Create flexible course content and update framework: oriented by students needs and employment forms, revise teaching materials quickly to ensure that they are closely connected with practical application, so as to improve the practicability and relevance of teaching materials. To create an interconnected educational data space: with the help of advanced information technology, to build a database of multiple languages, promote information interaction and collaboration, enable teachers to access to rich teaching materials, and enable students to learn in a variety of ways.

The lack of adaptability of teaching content and localization is an urgent problem to be solved in the combination of foreign education and Sino-foreign cooperative school-running projects. One of the biggest challenges faced by students in the learning process is the disconnection between learning materials and real life applications, especially when the materials do not fully consider the language use habits of Chinese students, especially ^[5]. Part of the reason for this question is that the traditional teaching mode often emphasizes the indoctrination of theoretical knowledge, while ignoring the effective connection with students real life experience ^[6]. In different education systems, teachers may be influenced by different cultural and educational concepts involved in terms of teaching purposes and evaluation means. In some countries that emphasize testing, teachers may be more inclined to teach examination strategies, rather than neglecting the shaping of students critical thinking ability and innovation ability in ^[7].

Countermeasures and suggestions

1. Promote the exchange and training of cross-cultural educational concepts

The exchange and training of cross-cultural and educational concepts is a necessary condition for the development, which requires both sides to effectively carry out cross-cultural exchanges in teaching, strengthen the mutual learning and understanding between the cultures of both sides, and improve the professional skills of teachers. This process not only promotes teachers and students to gain insight into the multi-cultural heritage, respect the multi-cultural heritage, but also improves the teaching effect, so that students learning experience has been efficiently optimized.

The promotion of cross-cultural exchanges is crucial to the development of cultural mutual learning activities between teachers and students. Such activities can be conducted by inviting distinguished people from partner countries to give speeches, participating in interactive work seminars, or conducting in-depth discussions, giving participants a deep understanding of the history, social structure, belief system, and educational system of another country. For example, American institutions and universities have the ability to attract Chinese educators to introduce effective examples and experiences of Chinas basic education. At the same time, Chinese partners can also demonstrate their traditional Chinese education concepts and practices. This interactive learning process can effectively break down the inherent stereotypes and promote the improvement of the deep cognition and empathy ability of other cultures. The implementation of cross-cultural education extremely requires teachers to receive professional training. The training program should include but is not limited to cross-cultural exchange skills, multicultural education concepts, international education policies and their practice. Through such courses, teachers can not only

understand the teaching methods to deal with cultural differences and diverse needs, but also master how to efficiently use modern technologies, such as online platforms and virtual reality, to simulate various cultural backgrounds and create immersive cultural exchange and learning scenarios. For example, through role-playing, case analysis and transnational cooperation projects, teachers help students to enhance their understanding of cross-cultural communication and their skills in solving practical problems.

The dic evaluation and reflection process plays an important role in the improvement of cross-cultural educational skills. It is based on the continuous evaluation of teaching activities, focuses on stimulating the free communication between teachers and students, jointly analyzes the highlights and problems in the teaching process by means, and promotes the creativity of teachers in the teaching content and methods as the ultimate goal. With the help of this means, not only the defects in the teaching strategy can be deeply explored and improved, but also the teachers can be constantly creative in the teaching content and way. Therefore, it has a very positive and effective effect on the improvement of cross-cultural educational skills.

2. Establish a dynamic curriculum development and adjustment mechanism

To cater to the changing learning needs of students and the rapidly changing needs of the market, the formation of flexible course content and update mechanism on the stage of global education cooperation is extremely critical. This mechanism enables the teaching content to closely integrate with students learning goals while keeping pace with the latest development of the industry. In order to achieve this goal, cooperative education institutions need to carry out regular course feedback activities, draw suggestions from students, teachers and experts in the industry, and take these feedback opinions as an important basis for course improvement. For example, provide feedback information about course content, teaching methods, textbook selection and other aspects, and obtain ^[8] through questionnaire survey, forum or online forum. Such feedback is essential for insight into students challenges, the focus of interest on the way, and the scope to improve.

Organizing an education curriculum committee composed of multi-field experts is responsible to periodically review and refresh teaching materials based on collected information and business trends. The team brings together education authorities, industry insiders, and representatives from the student community, with their aims to ensure that the curriculum is designed with both theoretical depth and practical guidance. For example, a group of learners in a particular industry-specific course can discuss how to integrate the latest technological advances and career development paths into teaching cases and project activities to make the learning content more in line with the needs of the actual workplace.

Stimulate the joint efforts of teachers and students, optimize the course content, through the implementation of flexible teaching evaluation system. Approaches to achieve this goal include the introduction of a student assessment system and the implementation of a continuous professional growth program. For example, the course evaluation should include students participation, academic achievements and feedback, so as to stimulate students enthusiasm to put forward optimization suggestions and adopt suggestions in practice. To build an interactive platform for cultural exchange and educational resources that gathers global student cases, industry examples, academic achievements and other materials for teachers and students to use and learn from. This

initiative will not only make the teaching content more diverse and richer, but also improve students communication skills in an international environment. To create a multi-angle and practical teaching environment, with the means of real-time industry information supply, experience exchange of international cooperation projects, and cross-cultural successful case discussion, to optimize the application value and timeliness of the course.

Conclusion

Foreign language education plays an important role in personal career development. Sino-foreign cooperative school programs provide students with a global learning atmosphere and resources, but they also face problems such as cultural differences, conflicts of teaching ideas, and resource utilization efficiency. The challenges in the application of educational methods in Sino-foreign cooperative running schools include the differences in teaching concepts, teaching strategies and evaluation standards, as well as the lack of adaptability of teaching content and localization.

In response to the challenges facing the global education field, need to promote the intercultural education concept communication and training, establish dynamic curriculum development and adjustment mechanism, through chinese-foreign cooperation in running schools, in resource sharing innovation teaching way across cultural education, etc., is expected to achieve greater breakthrough, thus bring more opportunities and value for global education field, through flexible course content and update mechanism, synchronization with the latest industry development, combining the teaching content and students learning goals. With the help of cross-cultural education concept of communication and training, improve the understanding and respect of multicultural teachers and students, so as to promote the teaching effect and the improvement of students learning quality, in perfecting teaching evaluation system to motivate teachers and students to optimize the course content, make the course application value and timeliness of further promotion, create more possible and contribution in the field of education. The progress of technology and the growth of social demand for international talents will promote the continuous improvement and innovation of Sino-foreign cooperative school-running projects, so as to promote the development of educational cooperation to a more in-depth and efficient direction, so as to meet the demand of the society for international talents. Make education cooperation at a higher level.

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Conflict of Interest

The authors declare no conflict of interest.

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Application of two-dimensional code technology in college students archives management

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Abstract

Two-dimensional code technology can be applied to college students archives management by using its large-capacity information storage technology, which can greatly improve the efficiency of student file management. This paper first analyzes the feasibility of two-dimensional code technology for college student file management, and expounds the advantages of two-dimensional code technology applied to student file management, and finally explores the risks and challenges and solutions. This paper aims to promote the application of two-dimensional code technology in student file management in terms of safety, accuracy and efficiency.



Full Text Article



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Keywords: two-dimensional code; file management; student archives

Introduction

College students' archives are highly sensitive archives materials, which are the basis of proving students' identity. College students' archives are of great significance to college construction and talent selection. At the same time, file information security is the key and difficult problem in the work of college students' file inquiry. At present, most of the college students' file inquiry work stays at the stage of manual inquiry. Although this way of archives inquiry and utilization has its important practical significance, it lags behind the development process of archives informatization, consumes labor and energy, and has low work efficiency, and cannot meet the needs of social development. At present, how to provide safe, accurate and efficient electronic inquiry service for college students' archives has become an important issue in the management service of student records.

Application feasibility analysis

2.1 Features of two-dimensional code technology

Two-dimensional code is composed of a specific geometric pattern and distributed in the two-dimensional direction of the plane, the current widely used two-dimensional code for two-dimensional code, the most important advantage is that it contains a large amount of information, easy to be identified, and low cost, widely used by the current society. Two-dimensional code is based on the new photoelectric information technology, relying on the concept of bit stream, a variety of data character information, in two dimensions of the two-dimensional plane in the direction of black and white alternately arranged, "1" and "0" in the computer language respectively represent black and white, composed of graphics can be easily recognized by the user mobile device image recognition device, to achieve rapid sharing of information content^[1]. Two-dimensional code adopted in the informatization construction of college students' archives is suitable for Chinese character coding, which can be directly recognized by smart phones. Two-dimensional code technology should be fully utilized to provide accurate, efficient and safe services in college student.

2.2 Advantages of two-dimensional code technology

First of all, the application of two-dimensional code technology in college student file management is not difficult, compared with magnetic cards, IC cards and other storage methods, the technical difficulty is low, and the advantage of low development difficulty makes two-dimensional code technology more dominant in college student file management. Secondly, the information content of two-dimensional code is huge, far exceeding the information content of one-dimensional code, and the two-dimensional code can easily store the text information in college student file materials, and the two-dimensional code can also put anti-counterfeiting information into the bar code, which is convenient for people to identify the true and false. Finally, the development cost of two-dimensional code technology is extremely low, and similar radio frequency identification systems mainly rely on reading equipment to read information, but because the chip cost used is too high, it cannot replace two-dimensional code technology as the mainstream; Two-dimensional code technology not only has the advantages of low development difficulty, large amount of information and low cost, but also has the advantages of not easy error and wide coding range^[2]. The maturity and convenience of two-dimensional code technology greatly increase the feasibility of its application in the management of student records.

2.3 A good network environment

As of 2023, Chinese smartphone penetration rate exceeds 75%. With the rapid development of Internet technology, my country's smartphone penetration rate is growing rapidly. The public is no stranger to the use of Two-dimensional codes. Scan Two-dimensional codes for payment, scan Two-dimensional codes for information, etc. Two-dimensional code technology is now everywhere in society. Two-dimensional code technology has high requirements for the network. At present, 3G and 4G signals of smart phones in China have been fully popularized, and 5G technology tends to mature. Almost everyone in university campuses has mobile devices that can enjoy the network at high speed. Every university also basically achieves full network coverage, which provides good

conditions for the application of two-dimensional code in college student file management.

2.4 Promoting the resource integration of student file information

Two-dimensional code can integrate file information resources, its main job is to organize all the data in each college student file in an orderly manner, and integrate the disordered documents into an orderly digital college student file through two-dimensional code technology; on this basis, two-dimensional code technology can edit abstracts and catalogues of information in the files, and set up corresponding retrieval directories for easy access^[3]. When the student file information changes, the staff can integrate the old and new information resources by updating the two-dimensional code, effectively avoiding the lack and distortion of information, and the application of two-dimensional code technology effectively promotes the integration and management of college student file information.

2.5 Practical application of introducing two-dimensional code technology

Specifically, the two-dimensional code can be placed in the upper right corner of the material cover, all college students' material information can be compiled into the two-dimensional code, and the corresponding entry directory can be set. To develop two-dimensional code information system for college students, firstly, input college students' archives into archives digital management platform and create a college students' information database, then develop two-dimensional code of information database. The university student information database shall contain the personal basic information of university students, admission time, graduation time, examination results, internship employment situation, rewards and punishments, etc. After creation, the information to be consulted can be retrieved according to the catalogue needs, and the corresponding two-dimensional code can also be generated for mobile equipment to scan the code to identify the content information. When grass-roots party organizations manage college students' files, they can scan the Two-dimensional code with smart phones to learn and consult the relevant information of college students' files. The application of two-dimensional code technology in the practice of college students' archives management can ensure the standardization of process dynamic management, promote the transformation and upgrading of paper archives management to electronic archives management, and further improve the informatization level of college students' archives management.

Advantages of two-dimensional code technology applied to student file management

3.1 Ensure the authenticity of the source of the material

College students file formation time is long, after graduation will "file with people go", file transfer is a very normal thing, but some for employment, promotion, because of the qualification conditions restrictions, some people will take risks, through various improper ways to fake, think in the circulation process muddle through, fake, to the unit audit process brought certain difficulties^[4].

If two-dimensional code technology is actively introduced into college student file management, all information of all files in college student management system will be converted into two-dimensional code and placed in the upper right corner of relevant documents. With the help of two-dimensional code technology, each college student file has a unique two-dimensional code. In the later stage, if you need to call and retrieve a college student file, you can quickly query the target two-dimensional code through keywords, and you can obtain all the content information of the target file.

3.2 Improve process management standardization

Traditional college student files have complicated procedures to consult. In each college file bag there are various student documents, such as high school graduation registration forms, college transcripts, honor certificates, graduation certificates and other materials. In order to prevent file loss and damage, it is basically not allowed to view students' file materials without special circumstances when collecting college students' file materials in daily work. When graduate students enter the school, their student records and personnel files are transferred to the school where they study, but different schools, different student training processes and each time are different. After being transferred to the new training unit, it takes a lot of time for the grass-roots organizations to collect, manage and examine the file materials of college students. If the two-dimensional code technology is applied to the dynamic management of college students' files, the information of student status files can be scanned by mobile equipment, which will avoid repeated verification of the original carrier file materials and effectively improve the efficiency of dynamic management of student status files process. Standardized management makes the storage and use of college students' files orderly, which can greatly reduce the risk of damage and loss of original files. After embedding the Two-dimensional code on the cover of the material, each college student file is equivalent to having a unique "ID card". In the subsequent review of college student files, the reviewer can obtain information by scanning the Two-dimensional code, which can track and record the whole process of the formation and management of the college student file, thus ensuring the process standardization of college student file management.

3.3 Ensuring the security of college students' archives management

The application of two-dimensional code technology in the management of college students' archives can improve the safety of work. In the daily management of student registration files, the contents of student registration files are complicated and there are many styles, so there will be many difficulties in the process of collection and arrangement. The loss of original files often occurs, and it is difficult for the responsible personnel of grass-roots units to ensure that each student registration material is intact. The application of two-dimensional code in the management of college students' files can fundamentally solve the problem of repeated access and review of student records, so as to protect the safety of original files. In order to further ensure the security of student status file management, operation record function can be added to the student status file information management system to ensure that the borrowing and consulting work of student status files can be traced, the original file materials are not easy to lose, firewall is added for the dynamic

management of student status files, and the security of file work is guaranteed.

3.4 Improving the convenience of using college students' archives

Introducing two-dimensional code technology into the management of student status files, inputting the information content in a student status file into the two-dimensional code, scanning and identifying and reading the content through mobile equipment, can greatly reduce the time of browsing files, improve the file searching efficiency, accurately locate the content that needs to be consulted, and reduce the time cost. At present, in the management of student status files, coding and classification should be carried out for each student status file material. Each student status file contains various materials, such as volunteer book for joining the Party, thought report, personal honor certificate and personal information. Two-dimensional code technology will include different types of information in a student status file into two-dimensional code one by one, which is convenient for management and user inquiry and utilization^[5]. Two-dimensional code technology can also identify the identity of the inquirer during file inquiry, and identify who has used this student status file by scanning the code, eliminating many work processes and facilitating the inquiry and utilization of student status files.

Challenges faced by two-dimensional code technology in college student file management

4.1 Risk of leakage

Two-dimensional code technology itself has high security, and the information security problems of student files are mainly concentrated on the user side. Through the use of two-dimensional code in student files, the dissemination of student file information becomes very convenient, but users usually lack understanding of the hidden dangers of file information security student files, and are easily used by illegal student file elements, resulting in information theft, thus causing some adverse events or harm to student files. In addition, the level of equipment security student file integrity also affects the use of two-dimensional code security student file degree. At present, to apply the two-dimensional code technology to the electronic inquiry entity management of student files, it needs certain funds and professional talents for student files. How to effectively do a good job of student file electronic inquiry information system and two-dimensional code system student file docking, while reducing information security issues become the focus of student files.

The two-dimensional code is placed on the cover of each student file, and all information in the file is contained in the two-dimensional code. In the use of student status files, the two-dimensional code in each file is an ordinary pattern, and the identification degree is not high. Meanwhile, the workers and users of student status files usually do not know enough about the potential safety hazards existing in the two-dimensional code. While convenient management, there are also potential information security risks. If this small two-dimensional code is obtained by illegal means, all the information of this student status file will be leaked, causing a series of adverse events. Therefore, there are problems in the application of two-dimensional code technology in the management of student status files. It is necessary to find a balance point between efficient work

and safe work to ensure that student status information is prevented from being stolen on the basis of convenient work. It has become a big challenge to do a good job in the docking of student status file management system and two-dimensional code system to reduce information security risk.

4.2 Lack of standards

Due to the characteristics of student file work, the connection between electronic query management system and two-dimensional code technology is not simple. The mature two-dimensional coding technology has high requirements for image acquisition, processing speed and reliability. At present, there are application standards for two-dimensional code in China, and there are various coding methods, but there is no clear standard for two-dimensional code in student file management. In order to apply two-dimensional code reading technology to electronic in query of student files, it is extremely important to select two-dimensional code coding methods with high confidentiality and strong error correction ability.

4.3 The technology itself is flawed

At present, the defects of using two-dimensional code technology to store information are mainly reflected in the following two aspects: on the one hand, two-dimensional code can carry virus code, two-dimensional code carries a large amount of file information, and can also store virus, illegal link, etc., so it is difficult to identify illegal information from the surface in daily work; On the other hand, there is a risk in the process of one-way transmission of information between archives and users. The information transmission mode of two-dimensional code technology in college students' archives work is one-way transmission. In view of this characteristic, lawbreakers can obtain information through hijacking the one-way transmission process between scanning equipment and archives, archives and management system background. The information hijacking security problem generated in this process is also a big challenge.

Responses and measures

5.1 Set watermark function to prevent information leakage

In order to further improve the security of student file management, watermark function can be added to two-dimensional code. Watermarking technology can effectively prevent information from being illegally copied and tampered with. By embedding specific watermark patterns or information in the two-dimensional code, the uniqueness and authenticity of the two-dimensional code can be ensured. When scanning the two-dimensional code, the system will automatically detect the watermark information. If the watermark information is found to be inconsistent with that stored in the database, the system will refuse access, thus effectively preventing information leakage and illegal copying. Adding two-dimensional code digital watermark function in the student status file management system, scanning two-dimensional code can display the basic information of file searcher and file manager, as well as the source of the student status file, monitor the user's operation record, access time and printing behavior in real time, add authority setting to the searcher and reference link, realize the record of the whole process of file borrowing and use, and add safety

defense line for the application of two-dimensional code technology to student status file, which can greatly improve the safety coefficient of college student file management.

5.2 Strengthen the security of two-dimensional code technology

First of all, when developing the two-dimensional code of student status files, we should strengthen the supervision on the production of two-dimensional code, establish a safety monitoring and evaluation mechanism for the development of two-dimensional code and the background of student status file management system, review in a strictly confidential way, and regularly entrust a third party to carry out two-dimensional code stability detection. The second is to strengthen the verification steps of the management platform of the student status file management system, ensure the security of information in the one-way transmission process, allow the Party branch branch committee personnel who can identify the Two-dimensional code equipment to use the student status file, and other personnel have no right to consult and access the relevant information of the student status file, so as to prevent the third party from accessing in time. The defects of two-dimensional code in practical application are dealt with in the above two ways, and the safety of two-dimensional code technology is improved. At the same time, in order to cope with technical defects and safety risks, the coding method of Two-dimensional code should be updated regularly. The security and anti-attack ability of two-dimensional code can be improved by updating the coding algorithm and error correction mechanism of two-dimensional code continuously. At the same time, regular updates can prevent criminals from using known vulnerabilities to attack and ensure the security of student records information.

User authentication mechanisms can also be strengthened. Before scanning the Two-dimensional code, the system can ask the user for identity verification, such as entering a password, using biometric technology (such as fingerprint or facial recognition), etc. Only authenticated users can access the information of student records, thus effectively preventing unauthorized access and information disclosure.

5.3 Establish and improve the technical standard specification of two-dimensional code

In order to ensure the effective application of two-dimensional code technology in the management of student records, it is very important to establish a set of perfect two-dimensional code technical standards. First of all, a unified two-dimensional code coding standard needs to be developed to ensure smooth docking and sharing of information between different departments and agencies. Secondly, the application scope and use specification of two-dimensional code technology in the management of student records should be clarified, including the generation, storage, transmission, identification and destruction of two-dimensional code, so as to ensure the security and integrity of information.

In addition, a review and supervision mechanism for Two-dimensional code technology should be established to regularly inspect and evaluate the generation and use of Two-dimensional codes to ensure that they meet safety standards. At the same time, corresponding emergency plans should be formulated. Once safety problems are found in the application of two-dimensional code technology, measures can be taken quickly to reduce losses.

At the technical level, relevant enterprises and research institutions should be encouraged and supported to carry out technical research and innovation, continuously optimize Two-dimensional code technology, and improve their anti-virus, anti-tampering and anti-interference capabilities^[6]. At the same time, the docking with international standards should be strengthened to ensure the compatibility and security of Two-dimensional code technology in international exchanges and cooperation.

Through the establishment of sound two-dimensional code technical standards, it can provide safer and more efficient technical support for the management of student records, and provide more convenient and reliable services for students and educational institutions. This not only helps to improve the overall level of student record management, but also helps to protect students' personal privacy and information security, and provides a strong guarantee for the healthy development of education.

5.4 Establish and perfect archives management standard

By formulating clear application standards and specifications of two-dimensional code, the correct application of two-dimensional code technology in student record management can be ensured. At the same time, the specification should cover the generation, storage, transmission and destruction of two-dimensional codes to ensure the safety and standardization of the whole management process. On the other hand, by regularly holding safety knowledge lectures and training courses, archivists and users can improve their understanding of the security risks of Two-dimensional codes and enhance their safety awareness, thus effectively preventing and reducing the occurrence of security incidents.

Conclusions

To sum up, the application of two-dimensional code technology in college student file management can greatly improve work efficiency, improve the standardization of the management process, and ensure the authenticity, integrity and security of college student file management. In the future application practice, relying on digital network technology, we will strengthen efforts to solve the difficult problems in the application of two-dimensional code technology to college students' file management, comprehensively promote the transformation and upgrading of college students' file management, and provide efficient and convenient student file services for users. In the process of convenient and efficient transformation, we should take preventive measures to avoid technical loopholes, perfect corresponding work regulations, promote the handover and integration of new forms of archives work and traditional archives work methods, and innovate on this basis to ensure the common progress of archives work and digital era, and make steady progress in the course of social development, so as to obtain greater development space for archives cause.

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Conflict of Interest

The authors declare no conflict of interest.

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A study on the current situation of chemistry laboratory construction and management in undergraduate colleges and universities

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Abstract

With the development of higher education, the laboratory construction in undergraduate colleges and universities has become increasingly important, serving as a crucial indicator of their teaching and research capabilities. However, some chemistry laboratories face issues such as low resource utilization efficiency, long construction cycles, and limited functionality. This paper deeply analyzes the current situation of undergraduate chemistry laboratories in terms of system construction, platform development, and talent cultivation, and proposes strategies such as optimizing laboratory platforms and facilities, strengthening the professional capabilities of teaching and management teams, and innovating management models. The aim is to provide a reference for the laboratory construction of undergraduate colleges and universities, promote the efficient integration of educational resources, further enhance teaching quality and research innovation capabilities, and drive the high-quality development of higher education.



Full Text Article



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Keywords: undergraduate colleges and universities; chemistry laboratories; improvement pathways

Introduction

In recent years, with the country's emphasis on higher education, undergraduate colleges and universities have experienced rapid development, with an expanding enrollment scale. Despite the emergence of new majors, the laboratories of the historic chemistry and chemical engineering majors in these institutions remain crucial venues for experimental teaching, scientific research, and

talent cultivation in the fields of chemistry and chemical engineering. These laboratories have surpassed the traditional concept, undergoing reorganization or new construction to meet evolving needs^[1]. As higher education continues to evolve and experimental teaching reforms deepen, the construction and management of chemistry laboratories in undergraduate colleges and universities face numerous challenges. Under limited resources, these institutions are confronted with new demands to build modern chemistry laboratories with high standards and efficiency. A powerful chemistry laboratory not only requires foresight and scientific rigor but must also align with the needs of discipline development^[2]. Additionally, it should possess excellent software conditions, superb management capabilities, and a high-quality, highly skilled experimental team.

Problems in the management of chemistry laboratory construction in public undergraduate schools

2.1 Serious compartmentalisation of resources and poor top-level design

Due to the differences among disciplines, professions and courses, the division of laboratory resources is inevitable^[3]. However, excessive division not only makes it impossible to share and optimise laboratory resources, but also leads to duplication and wastage of laboratory resources. In addition, due to the lack of unified planning and design, there is also the problem of uneven distribution of resources in the vertical dimension of laboratories. Some popular disciplines have relatively adequate laboratory resources, while some cold disciplines are under-resourced. This uneven distribution of resources has to a certain extent hindered the development of the disciplines and the quality of talent training.

2.2 Inadequate laboratory management system

A sound laboratory management system is crucial for ensuring the normal operation of laboratories. However, currently, many vocational colleges' chemistry laboratories face issues with their management systems. Firstly, the safety management system in laboratories is not perfect. Some laboratories lack necessary safety facilities and warning signs, posing potential safety hazards. Secondly, the equipment management system in laboratories is not stringent enough. Some equipment lacks standardized management processes in terms of use, maintenance, and repair, leading to damage and waste. Additionally, the personnel management system in laboratories is not clear enough^[4-5]. Some laboratories lack clear regulations on the responsibilities, rights, and obligations of laboratory personnel, resulting in varying levels of responsibility awareness and management skills among them.

2.3 Software and hardware conditions of laboratories need to be upgraded

The construction and management of chemistry laboratories rely on solid software and hardware support. However, at present, many undergraduate universities' chemistry laboratories still face numerous challenges in this regard. On the one hand, some laboratories lack cutting-edge experimental instruments and equipment, which undoubtedly undermines the quality and

effectiveness of experimental teaching^[6-7]. On the other hand, the spatial planning of some laboratories is not entirely reasonable, and the basic supporting facilities such as ventilation and lighting need to be improved, causing inconvenience in experimental operations^[8]. Furthermore, issues such as equipment aging and delayed updates also exist in some laboratories, which similarly have an adverse impact on the quality and effectiveness of experimental teaching^[9].

2.4 Inadequate quality of the experimental technical team

Laboratory technicians are the key force in laboratory construction and management. However, at present, some undergraduate chemistry laboratories still face several challenges in the construction of experimental technology teams. Firstly, the professional quality of experimental technicians needs to be improved urgently. Some laboratory technicians lack the necessary professional knowledge and skills, resulting in deficiencies in experimental operation and management. Secondly, there is an insufficient number of experimental technicians. Some laboratories have been affected by insufficient staffing, which has affected their daily operations and management. In addition, the management level of experimental technicians also needs to be improved. Some personnel lack necessary management experience and methods in personnel scheduling, equipment management, and other aspects, which affects the laboratory's operational efficiency and management level^[10].

Pathways and Countermeasures of Chemistry Laboratory Construction Management in Undergraduate Colleges and Universities

3.1 Precise top-level design and planning

The construction planning of chemical laboratories in undergraduate colleges is the core of laboratory management in vocational colleges, involving the improvement of laboratory facilities, the updating of equipment, and the optimization of space. This plan aims to ensure the smooth progress of experimental teaching and scientific research activities by improving the hardware conditions and environment of the laboratory, while also enhancing the safety, efficiency, and sustainability of the laboratory^[11-12]. Specifically, the improvement of laboratory facilities requires laboratories to have premises, facilities, and environments that meet the requirements of experimental technology work; The renewal of laboratory equipment focuses on introducing high-end, intelligent, and green instruments and equipment to enhance scientific research capabilities and teaching standards; The optimization of laboratory space focuses on safety, flexibility, and adequate storage space to enhance efficiency and safety, ensuring the efficient operation and sustainable development of laboratories^[13].

The accuracy of the top-level design and planning of a chemistry laboratory is crucial to its functionality and safety. Chemistry laboratories are places for chemistry teaching and scientific research. The design of the laboratories should take into full consideration the needs of various experimental operations and ensure that the laboratories can provide a safe, comfortable and efficient working environment. It is only through accurate top-level design that the various functional areas can be laid out in a reasonable manner, the smooth flow of experimental operations can be ensured, and the necessary safety facilities and emergency measures can be provided to prevent and cope with accidents in the course of experiments.

Top-level design planning for chemistry laboratories is crucial for the configuration and layout of experimental equipment and instruments. It needs to ensure that equipment selection and layout match the functional needs of the laboratory and optimise the co-ordinated use of equipment as well as the flow of sample and reagent transfer. Accurate top-level design can rationally arrange experimental benches and equipment areas, reduce interference and cross-contamination between instruments, and improve work efficiency and data accuracy. At the same time, the design also needs to consider safety, efficiency, special equipment layout, environmental control, water supply and drainage and electrical requirements, as well as telecommunication and information management systems to ensure the efficient operation of the laboratory and to meet the accuracy and safety requirements of the experiments.

Precise planning of the top-level design of a chemistry laboratory can also leave enough space and room for future development of the laboratory. The top-level design of the laboratory should take into full consideration the possible future direction of scientific research and teaching needs, and provide flexible and changeable experimental areas and equipment, so as to facilitate the upgrading and modification of the laboratory at any time. Only through accurate top-level design can it be ensured that the laboratory can adapt to the needs of scientific and technological development and teaching reform.

The top-level design of chemistry laboratories in undergraduate institutions needs to be precise in order to ensure the functionality and safety of the laboratories, the rational allocation of instruments and equipment, the effective management of air quality and environmental control, as well as the provision of sufficient space for future development. Such a design ensures that the laboratory provides a safe, efficient and comfortable working environment for the smooth running of teaching and research^[14].

3.2 Well-established institution-building

A well-established system for chemistry laboratories in undergraduate institutions can ensure that the requirements for laboratory safety, resource management, experimental teaching, scientific research support and environmental protection are effectively met. This is not only a requirement for laboratory management, but also the basis for ensuring the smooth conduct of laboratory work and the health and safety of personnel.

A chemical laboratory is a high-risk working environment involving many dangerous chemicals, high-temperature and high-pressure equipment and explosive substances. A well-established system can ensure the formulation and implementation of safe laboratory practices to minimise the risks to laboratory personnel and the surrounding environment.

Resources such as instruments, equipment, reagents and materials in the laboratory need to be effectively managed and maintained to ensure their normal operation and service life. The establishment of a sound system for the loan of instruments and equipment, reagent use and inventory management will enhance the efficiency of resource utilisation and save costs.

Chemistry laboratories in undergraduate colleges and universities are important places for cultivating students' practical skills and mastering professional knowledge. A sound system can regulate the process of experimental teaching, clarify the contents and requirements of experiments, and provide a standard experimental procedure and evaluation system to ensure the quality of

experimental teaching. Researchers also need to have strict rules and procedures for conducting scientific experiments and data collection^[15]. A well-established system can provide support for the declaration of scientific research projects, the use of funds, and the management of experimental data, thus facilitating the production of scientific research results and academic exchanges.

In addition, chemical laboratories usually produce waste and pollutants, which have an impact on the surrounding environment. The establishment of a reasonable waste disposal and environmental monitoring mechanism can ensure the environmental safety and sustainable development of the laboratory.

3.3 Excellent hardware and software conditions

Excellent hardware and software conditions in chemistry laboratories of tertiary institutions are necessary to ensure experimental safety, enhance experimental precision and support experimental teaching and scientific research. Only with advanced facilities and equipment can a safe, efficient and innovative experimental environment be created for teachers and students and excellent chemistry professionals be trained.

Chemical experiments involve a series of dangerous chemicals and operations, so laboratories must have good hardware and software facilities to ensure the safety of the experimental process. For example, the laboratory must be equipped with fire-fighting equipment, safe ventilation systems and safety cabinets to cope with the risk of accidents or chemical leakage and to protect the personal safety of teachers and students^[16].

In chemistry experiments, accurate data and results are very important. The laboratory must be equipped with advanced instruments and equipment, such as high-precision balances, spectrophotometers, gas chromatographs, etc., to ensure the accuracy and reliability of the experimental data. Similarly, the laboratory needs to provide stable environmental conditions, such as constant temperature and humidity, pure water and gas supply, to ensure consistency and control of the experimental conditions.

Chemistry laboratories in undergraduate institutions are not only used for scientific research, but also play an important role in developing students' practical skills and scientific spirit. Therefore, the laboratory needs to provide sufficient space and equipment to meet the teaching needs. For example, to enable students to carry out independent experimental operations and observations, the laboratory should be equipped with a sufficient number and variety of experimental benches, reagent racks, microscopes, etc. In addition, the laboratory should be equipped with an adequate number of laboratory tables, reagent racks, microscopes, etc. to enable students to carry out independent experimental operations and observations^[17]. In addition, advanced multi-media equipment and real-time monitoring systems should be provided to support the display and safety management of experimental teaching.

Apart from teaching, chemical laboratories in undergraduate institutions are also tasked with the mission of scientific research. In order to support scientific research, the laboratory must be equipped with advanced research equipment and technology platforms. For example, the laboratory needs to be equipped with advanced chromatographs, mass spectrometers and nuclear magnetic resonance (NMR) instruments to meet the needs of different research directions. At the same time,

the laboratory needs to provide high-speed network, data storage and processing equipment to support the collection, analysis and archiving of research data.

3.4 Highly qualified experimental and technical team

The laboratory technology team of chemistry laboratories in undergraduate colleges should be of high quality, which is not only related to the quality of laboratory teaching, but also involves the cultivation of scientific research ability and practical ability of students. High-quality laboratory technology team is an important guarantee to achieve the goal of cultivating applied talents in higher vocational colleges and universities.

High-quality laboratory technology team can guarantee the safety of laboratory teaching. In chemical experiments, a series of toxic, flammable, explosive and other dangerous substances are often involved, and a rigorous experimental technology team can operate correctly, standardise the operation procedures and ensure the safety of the experimental process. High-quality laboratory technicians have in-depth understanding of the operation principles of laboratory equipments, safety operation procedures, etc., and are able to deal with emergencies in time, prevent chemical leakage, fire and other dangerous incidents, and effectively maintain laboratory safety^[18].

High-quality laboratory technology team plays a key role in the detailed management of laboratory teaching and the promotion of scientific research. Laboratory technicians should have the ability to make strict experimental plans and design experimental programmes, and provide scientific and reasonable technical support for teaching and scientific research^[19-20]. They should master advanced experimental methods and techniques, and be able to complete complex experimental operations independently to improve the accuracy and reliability of experimental data. At the same time, high quality laboratory technicians can actively participate in scientific research projects, promote scientific research in the laboratory, and strive for more scientific research projects and funds for the university.

High-quality laboratory technicians are crucial to the cultivation of students' practical ability. Laboratory technicians are not only instructors in laboratory teaching, but also role models for students' practical operation. Skilled experimental operation skills, solid theoretical foundation and serious and responsible working attitude will have a positive influence on students. Through interaction with laboratory technicians, students can better understand the course knowledge, grasp the experimental operation skills and develop practical hands-on abilities. High-quality laboratory technicians can provide personalised guidance to students according to their actual level, so that students can get a more comprehensive and systematic cultivation of academic literacy in the laboratory.

High-quality laboratory technicians can help to build innovative laboratories. Laboratory technicians should not only master the traditional experimental techniques, but also keep pace with the development of science and technology, and introduce advanced instruments and experimental methods. They should be innovative and actively participate in the technological renovation and updating of the laboratories to promote the modernisation of the laboratories. Such a laboratory environment will help to attract high-level scientific research talents and improve the university's scientific research level and competitiveness.

Conclusion

The construction of chemical laboratories in undergraduate colleges is a long-term, arduous and complex systematic project. In order to improve the quality of education and scientific research, higher vocational colleges and universities must devote themselves to the construction of laboratories and make them an important place for cultivating students' practical ability and innovative spirit. Increasing capital investment is the key to laboratory construction. Higher vocational colleges and universities need to invest a lot of money in the construction of the environment and facilities of chemistry laboratories to ensure that the laboratories are equipped with advanced and complete laboratory equipment and devices to meet the needs of various scientific research and teaching. At the same time, undergraduate institutions also need to pay attention to the construction of environmental protection and safety facilities in laboratories to ensure that teachers and students can carry out experimental activities in a safe and comfortable environment.

At the same time, the cultivation of a high-quality, high-level, structurally rational, technically proficient, innovative and creative team of laboratory technicians is the most important task in the construction of laboratories. Undergraduate colleges and universities need to pay attention to the training of laboratory technicians to improve their professional quality and technical level. Through training and academic exchanges, they should encourage laboratory technicians to learn new knowledge and master new skills in order to adapt to the ever-changing needs of scientific research and teaching.

Universities also need to strengthen the scientific research management of laboratories to enhance the organisation and management of experimental work. They need to ensure that research work in laboratories is carried out in an orderly manner by formulating reasonable research plans and project management systems. At the same time, higher vocational colleges also need to pay attention to the opening up of their laboratories to the outside world, strengthen the co-operation with enterprises and scientific research institutions, and promote the transformation and application of scientific and technological achievements. Only in this way can the laboratories become a base for teaching and experimentation, scientific research and innovation in undergraduate colleges, improve students' practical ability and innovation spirit, and make important contributions to the cultivation of high-quality talents.

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Conflict of Interest

The authors declare no conflict of interest.

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Based on Stanislavsky - Comparison between American method acting and Chinese acting system

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Abstract

The article studies how the Stanislavsky system has influenced the performing arts in China and the United States, as well as how it has changed in each nation. Method Acting originated in the US and was based on Stanislavsky's "experiential" approach. The performance style of American theater and film was significantly impacted by the performance system that Lee Strasberg and other American drama educators devised. This technique was based on emotional memory and role substitution. By emphasizing the actor's authentic emotional experience and role substitution, this technique has produced a number of internationally recognized actors, including Dustin Hoffman and Marlon Brando.

The Stanislavsky system was first used in China and quickly gained popularity, eventually forming the mainstay of Chinese performance education. China has developed a distinctive performance technique that incorporates the features of classical opera after decades of investigation and absorption. Performance is now understood in a variety of ways, particularly as a result of Mei Lanfang's methodology. This essay examines the development and distinctions between the Chinese and American performance systems, highlights the challenges of advancing the Method School in China, and suggests that, in light of globalization, collaboration and mutual learning between the Chinese and American performing arts are essential.



Full Text Article



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Keywords: Stanislavsky system , method acting, performing, Emotional Experience

Introduction

Stanislavsky is a world-renowned actor, director, theater educator and theorist, a famous Soviet dramatist, who created a dramatic sensation for the Soviet Union against both China and the United States.

Stanislavsky (1863-1938) systematically summarized the "experience school" drama theory, emphasizing the principle of realism, and advocating that the actor should be immersed in the emotions of the characters. His whole set of drama teaching and performance system, known as the "Stanislavsky System", is one of the three major performance systems in the world, and has had a profound impact on the stage performances of drama, film and television in various countries.

The Stanislavsky system is a drama system that includes systematic expertise in acting, directing, drama teaching, and methods. It is a summary of Stanislavsky's lifelong creative and teaching experience, as well as his pioneer in the field of drama art. Summarizing the experience of the world's outstanding masters at the same time is based on his "organic nature" theory. He believes that human nature has infinite possibilities for development, and it is the living environment that shapes human character. The basis of mutual understanding is also the premise of the actor's incarnation performance. Therefore, Si Shi requires the actor to "start from the self", put himself in the position of "reaching the subconscious through consciousness", and completely incarnate into a character. At the same time, Si Shi attaches great importance to acting skills, and for this reason A set of methods for actor's physique and generation training is proposed. The system does not completely exclude improvisation in performance, and even regards it as a form of expression of actor's creative personality. It is the first time to make dramatic performance art, from actor training. To the stage practice, there is a complete scientific system, which affects the world. (Krause,1996)

It requires actors not to appear on the stage, but to actually exist on the stage, not to perform, but to live. Actors should always be real people on stage. They must obey the logical and organic laws of life, feel, think and act sincerely in prescribed situations. (Sweeney R,2021)

In general, the Stanislavsky "system" can be divided into three parts.

The first part, aesthetic principles and theatrical propositions. This part is concentrated in the book "My Artistic Life". In fact, in this book, he concentrated on writing an "introduction" to the "system" to be written in the future.

The second part, "Actor Self-cultivation". This part is divided into two aspects - internal skills and external skills. In his internal skills he created several elements such as concentration, communication, emotional memory, imagination, belief and reality, action and purpose. Among the external skills, he proposed "the development of physical expression, modeling, voice and articulation, language and grammar, speed and rhythm, control and modification, as well as personality, stage charm, moral discipline, etc.". Stein believes that only by mastering these elements can an actor establish a correct internal and external self-feeling and create a vivid stage image, so he must undergo rigorous training. If the actors cannot obtain the same sense of self in real life in the fictional stage time and space, and do not think, act and feel according to the logic of real life, it is impossible to create a living character image.

The third part, "Actors Create Characters". For example, an actor has three stages in creating a character—(1) how to correctly understand the script and the character; (2) how to experience the character on the basis of knowledge; (3) how to embody the character on the basis of experience. At the same time, when creating the characters, Stuart discovered the highest task and the importance of running through actions, inner monologues, subtexts, prescribed situations, physical action

methods, etc. These are the basic principles and methods that make up an actor to create a character. The actor's role creation has transformed from unconsciousness to self-consciousness, from hazy state to sobriety, and from superficial to profound. (PÄTrU C,2008)

When Konstantin Stanislavsky toured the United States with his famous Moscow Art Theater (MAT) in the early 1920s, he opened the doors to his now famous system that became the basis for American actor training(White, R,2011) , From Moscow to New York. New York Adopts Stanislavsky.The system spread slowly in the United States, and a new concept was derived: Methodology.

The "Method School" is a genre of drama film and television performance that emerged in the 1930s in the United States. They took the Russian "Stanislavsky System" as the starting point for exploration, and took the contemporary American society, American culture and American drama as the realistic foundation, and performed a large number of plays. , film and television practice, on this basis, a relatively systematic performance theory system and actor training methods have been formed, the "Stanislavsky System" has been revised and developed, and a unique American performance method and style have been created. From the 1930s to the present, "method school" performance not only fundamentally innovated the appearance of American drama film and television performance, but also had a profound impact on European and even the world's drama film and television performance.

In the 1940s and 1950s, "Methodists" introduced Tennessee? Williams' "A Streetcar Named Desire," "Cat on a Hot Tin Roof," Arthur? Miller's "All My Sons", "Death of a Salesman" and other landmark drama works in the history of American drama have made two contemporary American drama masters except O'Neill, and promoted the American national drama to become independent. and mature. "Methodist" performances became the mainstream of American theater performances. The "Method School" performance has also had a great impact in the field of film, and has cultivated a large number of outstanding film performance artists for the United States. As early as the 1930s and 1940s, the famous movie star John? Garfield became the "spokesperson" of the "Methodists" at Horama. In the early 1950s, the "Methodist" director Ilya? Kazan took Malone? Brando, Eva? Mary? "Methodist" actors such as Sente were pushed to Holamar, and the influence of "Methodist" in film performances was increasing day by day. In the 1960s and 1970s, the four talented actors Dustin? Hoffman, Al? Pacino, Robert? De Niro and Jack? Nicholsons are all "method" actors. They swept away the false and artificial traditional performance style of Holamar almost overnight, and presented a series of real images of ordinary people on the screen.In the 1970s and 1980s, "method school" performances reached their heyday. During this period, the most influential screen images on the American screen were almost all shaped by "method school" actors.(Hobgood,1967)

The Method School mainly digs out the complexity of human nature and human heart through the external limbs and expressions of actors.It requires actors to maintain the same mental state as the characters in front of the camera and behind the scenes.

At the same time, China had a very different influence

As early as the 1930s and 1940s, Zhang Min, Zheng Junli, Huang Zuolin and other old artists and scholars in the fields of drama, film and translation began to translate and introduce Stanislavsky's "system" according to different versions such as Russian, English and Japanese. " of various works. Except for "MY LIFE IN ART" translated by Qu Baiyin and "An Actor Prepares" (Part 1) translated by Zheng Junli, which are relatively complete, the rest are relatively scattered and not organized. In 1935, Mr. Mei Lanfang went to the Soviet Union to visit and perform. This was a historic meeting between the two great drama masters from China and the Soviet Union (Russia), and was warmly welcomed by the Soviet government and Stanislavsky himself. Mei Lanfang's performance was hailed by Stanislavsky as "regular free action", (TIAN, M, 2020) breaking free from naturalistic performance methods. Mr. Mei Lanfang has absorbed the rich nourishment from the experience school from the Stanislavsky "system". This is the first contact and academic exchange between Chinese opera artists and Stanislavsky , which is deeply engraved in the history of drama in China and the world.

In the early 1940s, the "system" was identified as the basic textbook for the National Academy of Arts to study performance and directing methods, because it was the only advanced academic theory considered to be socialist in nature. Looking back at the present, the understanding of Stanislavsky's "system" at that time was still relatively superficial, and there were even mistakes in understanding. It was not until the Chinese government hired a large number of Soviet experts to teach in China that they truly understood, understood, and mastered the true meaning of the "system"—a model of realism, a thorough experience school! Stanislavsky's students and well-known director educators and so on, they successively gave lectures at the Shanghai Theater Academy and the Central Academy of Drama, and directly spread Stanislavsky's "system". Dramatists from Beijing, Shanghai, and even all over the country flocked to study devoutly, try to imitate them, and regarded Stanislavsky as the supreme "God" in the drama world, a sacred and inviolable idol. It was not until 1962 that Mr. Huang Zuolin published the article "On the "Drama View" at the Guangzhou Conference, and put forward the point of view that the phenomenon of the "system" of the only one should be broken, which caused a great shock. He said: "The expression method of this 'fourth wall', which attempts to create an illusion of life on the stage, is only one of the many expression methods of drama... But people who are engaged in drama in our country seem to think that this is the only way to create drama. In this way, we are completely constrained and severely limit our creativity." This sentence can clearly be seen as dissatisfaction with the phenomenon of Stanislavsky's "system" and "uniqueness". Because the climate of contention had not yet formed at that time, it did not cause greater repercussions. But in the early 1980s, the theater world paid more attention, and a heated debate between "freehand drama view" and "realistic view of drama" was launched. The details of the debate are not discussed here, and will be written on a separate topic. But in the debate, it is mentioned that there are "three major systems" in our country's theatrical performance methods. The three systems of Stanislavsky, Brecht and Mei Lanfang. In order to promote his experience school and achieve the effect of artistic fidelity, Stanislavsky advocated that the "fourth wall" between the performances must be constructed on the stage to make the actors "lonely in public"; while Brecht's expressionists believed that, This "fourth wall" should be torn down without hesitation, so that actors can enter and play freely; however, the

Mei Lanfang School believes that there is no "wall" in the art of opera, so there is no need to tear it down, because the characters live in freehand brushwork. virtual time and space.

Method Acting

Method Acting is an innovative performance system that originated from the performance theory system of the Russian drama master Konstantin Stanislavski. It was introduced to the United States in the early 20th century and gradually evolved into a unique performance genre. Method acting was developed and innovated in the United States by acting teachers such as Lee Strasberg and Sanford Meisner. It emphasizes that actors can achieve a real and natural performance effect through deep emotional experience and in-depth understanding of the role.

It brought new performance concepts and techniques to Chinese actors. The following are some specific influences of American method performance on Chinese performing arts:

1. Emphasis on role substitution and emotional experience

While the method school stresses that actors understand the role and express inner emotions through personal emotional experience, the traditional Chinese performance system places greater emphasis on external performance skills and relies on external means like body and voice to shape the role. After the 1980s, this idea was progressively brought to China, giving Chinese actors additional ways to explore their inner feelings and giving their performances a more delicate and realistic feel. To achieve more authentic emotional expression in the performance, many Chinese actors started to feel the emotions of the character by meditating, thinking back on their own experiences, etc.

2. Encouraged performance education reform

Some art institutions started introducing pertinent courses to reform traditional performance education as a result of method performance's popularity in China. For instance, renowned performance schools like the Beijing Film Academy and the Central Academy of Drama progressively incorporated the theories and methods of the method school into their curricula. This allowed students to learn performance while mastering traditional techniques and comprehending the Western emotional experience school's performance methods. The next generation of performers may now train with both skills and emotions thanks to this pedagogical innovation, which enhances the performance's total depth and diversity.

3. Impact on the manner in which films are performed

The performance style of Chinese cinema is especially influenced by method performance. Chinese films went through a period of experimentation and invention from the late 1980s to the 1990s, during which time many filmmakers and actors attempted to portray the characters' inner lives in a more organic and genuine manner. The actors' performances in the films of directors like

Zhang Yimou and Chen Kaige are more realistic and less overdone, mostly due to the idea of method acting. The actors give the spectator a better connotative image of the character through more nuanced emotional expression, which improves the film's artistic expression.

4. Enhanced actors' creative approaches

Chinese performers have started to focus on the performance process rather than merely the outcome since the advent of method performance. When preparing for a role, many actors invest a lot of time in character research, delving deeply into the role's life history and even attempting to live the lifestyle. In order to portray the everyday life of the countryside more authentically and naturally on television, actors who play farmers, for instance, will spend some time living in the rural. The performers' creative process is enhanced by this in-depth knowledge of the character's life, and the performance gains more legitimacy and appeal.

5. facilitated the expansion of performing genres

China's performance style has expanded in diversity as a result of method performance. Traditional opera, which was more externalized and formulaic, had a significant influence on China's performance system in the past. More distinct performance styles have arisen as a result of method acting, which has caused many actors to focus on the characters' inner lives and unique expressions. In addition to being mirrored in films and television shows, this varied performance style is also frequently employed on the theatrical stage, bringing new life to China's performing arts.

The modernization of performing education, the creativity of Chinese actors in emotional experience and role creation, and the enhancement of performance style and meaning have all been facilitated by the effect of American method acting on Chinese performing arts. China's performing arts are facing both new chances and challenges as a result of the blending of Western and Chinese performance ideals in today's globalized society. Method acting offers a fresh approach to the growth of Chinese performing arts and expands the opportunities for producing Chinese performers. This performance approach will become more popular in Chinese performing arts as Chinese performers learn more about method acting.

Statement of Problems

Under this topic, I need to solve the following problem

1. How did Stanislavsky's impact on China and the United States differ in history?
2. Is the American method school guided by the experience school still applicable to the present?
- 3 Does China still need the Stanislavsky system after Mei Lanfang's system is formed?
- 4 Both China and the United States have been influenced by Stanislavsky's system. Why is there such a big difference between the film and television drama industry and actors' acting skills in today's era?

Further Objective for China

- 1.Understanding Chinese and American performance systems is influenced by Stanislavsky's historical context.
- 2.The importance of the American method to the sublimation and development of the performance system, insisting on a scientific performance system to treat different styles
- 3.China should continue to adhere to Stanislavsky's system, add its own innovations, add national characteristics, and keep pace with the times in the inheritance and development of traditional opera.
- 4.Find the gap between China and the United States in performance, the gap between the film and television industry, strengthen mutual cooperation and exchanges, learn more experience, recognize shortcomings, learn with an open mind, and promote the innovative development of film and television drama performances.

Conclusion

The Stanislavsky system plays an important role in Chinese performance and directing. The overall teaching of acting and directing in China is deeply influenced by the "Stanislavsky System", whether it is to follow the direction or just for basic training. In the syllabus, the arrangement of the "Stanislavsky system" is regarded as an important part. Under the influence of Stanislavsky's system, the director's teaching has established its own clear teaching structure. In the specific performance practice, the influence of Stanislavsky's system is also confirmed by the stage practice of many famous contemporary performance artists. (Jiang, H,2019)

The "method school" performance theory was developed on the basis of Stanislavsky's performance thought, and the "Stanislavian system" had a fundamental impact on the dramatic performance of the entire twentieth century. How could the "method school" be able to Turn this world-renowned Russian performance system into a unique American performance method, and it also has surpassed performance in film performance. Through comparison, we can understand the forefront of the innovation and development of the system, and can help us with the insufficient performance and acting skills. Providing better help can make cooperation and exchanges more convenient, make long-term progress in the performance industry, and have a significant impact on actors and performing arts careers.

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Conflict of Interest

The authors declare no conflict of interest.

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Analysis Digital Transformation on Corporate ESG Performance: A Qualitative Study

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Abstract

This paper investigates the impact of digital transformation on corporate Environmental, Social, and Governance (ESG) performance, employing a qualitative research methodology that includes in-depth interviews with industry leaders across various sectors. Through this analysis, the study reveals how the strategic adoption of digital technologies can significantly enhance organizations' capacity to achieve their ESG objectives. Likewise, Key themes identified from the interviews highlight the pivotal roles of digital tools in promoting transparency, facilitating robust stakeholder engagement, and optimizing resource management processes. Specifically, the findings indicate that companies utilizing digital transformation not only improve their ESG performance metrics but also foster a culture of sustainability that contributes to long-term competitiveness. Additionally, the results underscore the importance of integrating digital strategies with ESG initiatives, demonstrating that organizations positioned at the intersection of these domains are more likely to succeed in meeting stakeholder expectations and enhancing their overall market reputation. This research provides valuable insights for practitioners aiming to leverage digital transformation as a catalyst for sustainable corporate practices.



Full Text Article



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Keywords: Digital Transformation, ESG Performance, Qualitative analysis, Stakeholder Engagement, Sustainability, Corporate Governance

Introduction

The growing emphasis on corporate sustainability has heightened the importance of Environmental, Social, and Governance (ESG) performance in recent years. As stakeholders demand greater accountability and transparency, organizations are increasingly turning to digital

transformation as a means of enhancing their ESG efforts. Digital transformation encompasses a broad spectrum of technological innovations, including big data analytics, artificial intelligence, and blockchain technology, which facilitate more efficient operations and promote sustainable practices.

This study aims to explore the relationship between digital transformation and ESG performance, addressing the following research questions:

RQ1. How does digital transformation influence corporate ESG outcomes?

RQ2. What are the key mechanisms through which digital tools enhance ESG performance?

Understanding these dynamics is crucial for organizations seeking to integrate sustainability into their business models. By focusing on qualitative insights from industry leaders, this research sheds light on the practical implications of digital transformation for achieving ESG objectives. Moreover, The increasing urgency for sustainable business practices has led to heightened interest in understanding the relationship between digital transformation and corporate Environmental, Social, and Governance (ESG) performance (Cui, 2024).

The motivation behind this research stems from the growing recognition that digital technologies can play a crucial role in driving sustainability and improving corporate accountability. As organizations face mounting pressure from stakeholders and regulatory bodies to adopt sustainable practices, understanding the interplay between digital initiatives and ESG performance has never been more critical (Cui, 2024).

This paper is structured to provide a comprehensive exploration of this topic. It begins with an introduction that outlines the significance of digital transformation in today's business environment and its implications for ESG performance. Following the introduction, a literature review discusses relevant theories and frameworks that connect digital technologies with sustainability outcomes. The hypotheses section presents proposed relationships between digital transformation initiatives and ESG performance metrics, which are tested through qualitative analysis. The methodology section outlines the research design, detailing the process of data collection and analysis. The results section presents key findings from interviews with industry leaders, highlighting the impact of digital tools on ESG performance. The discussion section interprets these findings in the context of existing literature, identifying implications for practitioners and policymakers. Finally, the conclusion summarizes the main contributions of the study and suggests avenues for future research, emphasizing the importance of integrating digital transformation strategies with corporate sustainability efforts. Through this structured approach, the paper aims to contribute valuable insights into how organizations can harness digital transformation to enhance their ESG performance, thereby positioning themselves competitively in a rapidly changing business landscape.

Literature Review

Digital Transformation and Corporate Performance

Digital transformation has emerged as a critical driver of corporate performance, enabling organizations to adapt to changing market conditions and consumer expectations (Kraus et al.,

2021). It involves reimagining business processes and models through the integration of digital technologies, which can lead to increased efficiency, innovation, and competitiveness (Bharadwaj et al., 2013). Research has shown that companies that embrace digital transformation are more likely to outperform their peers in various performance metrics (Westerman et al., 2014).

ESG Performance in the Context of Digital Transformation

The concept of ESG performance encompasses a company's efforts to manage its environmental impact, social responsibility, and governance practices (Eccles et al., 2014). Organizations that excel in ESG performance are often viewed more favorably by stakeholders, including investors, customers, and employees, which can enhance their reputation and long-term success (Friede et al., 2015). Recent studies indicate that digital technologies can play a pivotal role in improving ESG performance by enabling greater transparency, facilitating stakeholder engagement, and streamlining resource management (Porter & Heppelmann, 2014).

Theoretical Framework

This study is grounded in two primary theoretical frameworks: the Resource-Based View (RBV) and Stakeholder Theory. The RBV posits that organizations can achieve competitive advantage through the effective use of their resources and capabilities (Barney, 1991). In the context of digital transformation, the ability to leverage digital tools for ESG initiatives can enhance an organization's resource efficiency and effectiveness. Stakeholder Theory emphasizes the importance of addressing the needs and expectations of various stakeholders, suggesting that organizations that actively engage stakeholders in their ESG efforts are more likely to succeed (Freeman, 1984).

H1: Digital Transformation and Transparency in ESG Performance

Digital transformation is increasingly recognized as a catalyst for enhancing corporate transparency, which is a critical component of effective Environmental, Social, and Governance (ESG) performance (Cui, 2024). By adopting advanced digital tools and technologies, organizations can streamline their reporting processes and provide stakeholders with timely and accurate information regarding their sustainability practices. This enhanced transparency not only builds trust among stakeholders but also fosters accountability. For instance, companies utilizing digital platforms can monitor and report their carbon emissions, waste management, and resource utilization in real-time, enabling them to respond swiftly to stakeholder inquiries and regulatory demands (Cui, 2024). Furthermore, transparency facilitated by digital transformation can lead to improved reputational standing and competitive advantage, as stakeholders—including consumers, investors, and regulators—are increasingly seeking companies that demonstrate commitment to ESG principles (Zheng et al., 2024). Therefore, we hypothesize that digital transformation positively impacts corporate ESG performance by enhancing transparency, which is essential for fostering stakeholder trust and ensuring compliance with evolving sustainability standards.

H2: Stakeholder Engagement through Digital Tools

The adoption of digital tools significantly enhances stakeholder engagement, which is a pivotal factor influencing corporate ESG outcomes. Digital transformation enables organizations to interact with their stakeholders more effectively and efficiently, fostering open communication channels that encourage dialogue and feedback. Through various digital platforms, such as social media, customer relationship management (CRM) systems, and interactive websites, companies can solicit input from stakeholders, allowing them to understand concerns and expectations related to environmental and social governance. Engaged stakeholders are more likely to support and participate in corporate sustainability initiatives, driving collaborative efforts that can lead to improved ESG performance. For instance, organizations that actively engage with communities and customers through digital channels can gather valuable insights that inform their sustainability strategies, resulting in more targeted and effective initiatives. Thus, we posit that the adoption of digital tools facilitates stakeholder engagement, ultimately leading to improved ESG outcomes as organizations become more responsive to stakeholder needs and expectations.

H3: Resource Management and Environmental Performance

Effective resource management is a crucial aspect of corporate environmental performance, and digital transformation plays a significant role in optimizing these processes. By leveraging digital technologies, organizations can gain greater visibility into their resource usage, allowing for more informed decision-making regarding sustainability initiatives. For example, digital tools such as data analytics, Internet of Things (IoT) sensors, and cloud computing can provide organizations with real-time data on energy consumption, waste generation, and supply chain efficiency. This enhanced visibility enables companies to identify inefficiencies, reduce waste, and implement sustainable practices more effectively. Furthermore, organizations that adopt digital transformation are better equipped to forecast resource needs, optimize inventory levels, and minimize environmental impact. As a result, we hypothesize that organizations leveraging digital transformation achieve better resource management, which directly contributes to improved environmental performance and overall ESG effectiveness. By integrating digital technologies into their operations, companies not only enhance their sustainability efforts but also position themselves for long-term success in a resource-constrained world.

Methodology

This study employs a qualitative research methodology to explore the impact of digital transformation on corporate ESG performance. Data is collected through semi-structured interviews with key stakeholders, including executives and sustainability managers, from a diverse range of companies that have implemented digital technologies (Liu & Cui, 2024). The interviews are designed to elicit insights into how these digital tools influence transparency, stakeholder engagement, and resource management. Thematic analysis is applied to identify recurring patterns and themes within the data, allowing for a comprehensive understanding of the relationship between

digital transformation and ESG outcomes (Liu & Cui, 2024). This approach ensures that the findings are grounded in real-world experiences and perspectives, providing valuable implications for practitioners and researchers alike.

Research Design and Model

The research design for this study is rooted in a qualitative framework, focusing on the intricate relationship between digital transformation and corporate ESG performance. The study aims to capture the experiences and insights of industry professionals through in-depth semi-structured interviews. This approach allows for flexibility in questioning, enabling participants to elaborate on their perspectives regarding the impact of digital technologies on ESG practices.

A purposive sampling technique is employed to select participants from a variety of sectors, ensuring a comprehensive understanding of different industry contexts. The interviews are transcribed and subjected to thematic analysis, which helps identify key themes related to transparency, stakeholder engagement, and resource management (Liu & Cui, 2024).

The conceptual model guiding this research posits that digital transformation serves as an independent variable influencing corporate ESG performance, which acts as the dependent variable. Within this framework, transparency, stakeholder engagement, and resource management are identified as mediating variables. This model not only elucidates the pathways through which digital transformation impacts ESG outcomes but also highlights the mechanisms that organizations can leverage to enhance their sustainability efforts (Liu & Cui, 2024). Overall, this research design provides a robust structure for exploring the dynamic interplay between digital innovation and corporate responsibility in contemporary business environments. Moreover, to mathematically represent the hypotheses outlined in this study, we can use a summation function to capture the relationships among the variables. Let E denote corporate ESG performance, and D represent digital transformation. We can express the hypotheses as follows:

$$E = f(D) + \sum_{i=1}^n M_i \text{ (Equation 1)}$$

Where M_i represents the mediating factors such as transparency, stakeholder engagement, and resource management, which are influenced by digital transformation. The function $f(D)$ indicates that as digital transformation improves, so does ESG performance, while the summation accounts for the cumulative effect of the mediating variables on the overall ESG outcomes (As shown in Equation 1).

Data Collection and Analysis

Data collection for this study involved a multi-step process to ensure a comprehensive understanding of how digital transformation impacts corporate ESG performance. Semi-structured interviews were conducted with key stakeholders, including executives, sustainability officers, and IT managers from various industries that have embraced digital technologies. A purposive sampling

strategy was employed to select participants who have firsthand experience with digital initiatives and ESG practices (Zheng et al., 2024).

The interviews were designed to elicit detailed responses regarding the role of digital tools in enhancing transparency, engaging stakeholders, and improving resource management. Each interview was recorded, transcribed, and subjected to thematic analysis. This analytical approach allowed for the identification of key themes and patterns related to the research questions. The analysis focused on understanding how digital transformation contributes to ESG outcomes, highlighting both facilitators and barriers experienced by organizations. By synthesizing qualitative data, the study provides rich insights into the practical implications of digital technologies for enhancing corporate responsibility and sustainability. This methodology ensures that findings are grounded in real-world experiences, contributing to both academic literature and industry practices (Zheng et al., 2024).

Results and Discussion

Enhanced Transparency

The analysis uncovered that the adoption of digital technologies significantly bolstered transparency within organizations, particularly concerning their Environmental, Social, and Governance (ESG) practices. Participants highlighted the critical role of innovative technologies, such as blockchain, in providing real-time visibility into supply chain processes. This heightened transparency enables companies to effectively track the origin and journey of their products, thereby fostering accountability and trust among stakeholders. For instance, by employing blockchain, firms can ensure that their supply chain partners adhere to sustainable practices, allowing consumers to verify the authenticity of claims regarding ethical sourcing and environmental stewardship. Additionally, digital dashboards and reporting tools have streamlined the process of disclosing ESG metrics, making it easier for organizations to communicate their sustainability efforts to investors, customers, and regulatory bodies. This enhanced clarity not only meets the growing demand for corporate transparency but also strengthens stakeholder relationships by providing credible and verifiable information about the company's ESG initiatives (Zhao & Cai, 2023). Consequently, organizations that leverage these digital advancements position themselves as leaders in transparency, ultimately enhancing their reputation and stakeholder trust.

Improved Stakeholder Engagement

The study further revealed that digital transformation plays a pivotal role in improving stakeholder engagement. Interviewees underscored that the implementation of digital tools significantly enhances communication and collaboration among various stakeholders, including employees, customers, investors, and community members. For example, social media platforms and online engagement tools have emerged as vital channels for gathering stakeholder feedback and fostering dialogue regarding ESG initiatives (Zhao & Cai, 2023). Participants noted that these platforms facilitate open communication, allowing organizations to actively solicit input from stakeholders, which can lead to more informed decision-making processes. Furthermore, digital

engagement tools enable companies to share their sustainability stories in real-time, fostering a sense of community and shared purpose. This two-way communication not only empowers stakeholders but also encourages their active participation in ESG initiatives. By leveraging digital transformation to enhance stakeholder engagement, organizations can cultivate stronger relationships, build loyalty, and gain valuable insights that inform their sustainability strategies (Zhao & Cai, 2023). Ultimately, improved stakeholder engagement leads to a more inclusive approach to corporate responsibility, where diverse perspectives are considered, resulting in more effective ESG outcomes (Zhao & Cai, 2023).

Efficient Resource Management

Moreover, the analysis highlighted that digital transformation is instrumental in achieving more efficient resource management practices within organizations. Several participants reported that the integration of data analytics and digital tools has enabled them to optimize resource usage, thereby minimizing waste and reducing environmental impact. For instance, organizations can utilize advanced data analytics to assess their energy consumption patterns, identify inefficiencies, and implement targeted energy-saving measures. This data-driven approach allows companies to not only lower operational costs but also align with their sustainability goals by significantly decreasing their carbon footprint. Additionally, the use of Internet of Things (IoT) technologies provides real-time monitoring of resources, enabling organizations to make proactive adjustments to their operations. Participants emphasized that these efficiencies contribute to overall improved ESG performance, as organizations become better equipped to manage their resources sustainably (Ding et al., 2024). By adopting digital transformation strategies, companies can create a more resilient and environmentally friendly operational model, ultimately enhancing their reputation and compliance with increasingly stringent ESG regulations. This commitment to efficient resource management underscores the importance of digital tools in driving both economic and environmental sustainability.

Conclusion

The findings of this study underscore the significance of digital transformation in enhancing corporate ESG performance. By leveraging digital tools, organizations can improve transparency, engage stakeholders more effectively, and manage resources more efficiently. These mechanisms not only contribute to better ESG outcomes but also enhance the overall competitiveness of organizations in the market.

This research supports the theoretical frameworks of RBV and Stakeholder Theory, highlighting the importance of utilizing digital resources to meet stakeholder expectations and achieve sustainability goals. Moreover, the insights gained from industry leaders provide practical implications for organizations looking to integrate digital transformation into their ESG strategies.

Contributions

This study makes significant contributions to the understanding of how digital transformation

influences corporate Environmental, Social, and Governance (ESG) performance. By employing qualitative methods, the research uncovers nuanced insights into the mechanisms through which digital technologies enhance transparency, stakeholder engagement, and resource management. The findings illuminate the critical role that digital tools play in helping organizations meet their ESG objectives, thereby providing a roadmap for companies seeking to leverage technology for sustainable practices (Ding et al., 2024). Furthermore, the identification of key themes, such as improved communication with stakeholders and efficient resource utilization, offers valuable implications for both theory and practice. This research not only expands the theoretical framework surrounding digital transformation and ESG but also serves as a practical guide for organizations aiming to enhance their sustainability performance through strategic technology adoption. Ultimately, this study highlights the potential of digital transformation as a catalyst for driving positive ESG outcomes, thus fostering a deeper understanding of its importance in today's corporate landscape (Ding et al., 2024).

Limitations

Despite its contributions, this study has several limitations that should be acknowledged. First, the qualitative nature of the research, while providing in-depth insights, limits the generalizability of the findings across different industries and organizational contexts. The sample is comprised of a select group of organizations that have implemented digital transformation initiatives, which may not represent the broader spectrum of companies, especially smaller enterprises or those in less digitally advanced sectors. Additionally, the reliance on interviews as the primary data source introduces potential biases, as participants may provide socially desirable responses or reflect only their individual perspectives rather than the organization's overall experience. Lastly, the dynamic nature of digital transformation and ESG metrics means that the findings may quickly become outdated as new technologies emerge and regulatory frameworks evolve. Future research should aim to address these limitations by including a more diverse sample and employing mixed-methods approaches to capture a broader range of experiences and perspectives.

Future Work Direction

Future research should build on the findings of this study by exploring the long-term impacts of digital transformation on ESG performance across various industries. Longitudinal studies could provide insights into how the relationship between digital tools and ESG metrics evolves over time, particularly in response to changes in technology and regulatory landscapes. Additionally, investigating the role of organizational culture in the successful adoption of digital technologies for ESG purposes could yield valuable insights into the internal factors that influence these outcomes (Wang & Esperança, 2023). Researchers should also consider examining the specific digital tools and platforms that have the most significant impact on ESG performance, identifying best practices for implementation and usage. Furthermore, comparative studies across regions or sectors could highlight differences in the adoption and effectiveness of digital transformation strategies in achieving ESG objectives (Wang & Esperança, 2023). By addressing these areas, future research

can contribute to a more comprehensive understanding of the interplay between digital transformation and corporate sustainability, ultimately guiding organizations in their efforts to enhance ESG performance.

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Conflict of Interest

The authors declare no conflict of interest.

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The Spirit of Northeast Anti-Japanese Resistance Movement: Its Promoting Role in the Study of Party History and Development for New-Generation University Students

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Abstract

The core of the spirit of the Northeast Anti-Japanese Federation lies in loyalty and belief in the party, which is precisely where the primary political quality and distinctive nature of the Chinese communists lie. In the journey of the new era, the majority of young students will deeply study the spirit of the Northeast Anti-Japanese Federation, and will deeply understand the importance of loyalty to the party, so as to strengthen their ideals and beliefs and improve their party spirit. This kind of unswerving belief and profound cultivation of party spirit is not only a powerful driving force for young students to continue to move forward in the study and education of party history, but also a solid cornerstone for them to become qualified party members and outstanding talents in the future. The spirit of the Northeast Anti-Japanese Federation is the heroic, fearless, and indomitable spirit displayed by the Chinese nation during the War of Resistance Against Japanese Aggression, and it embodies the loyalty of the Chinese Communists to the party and their deep feelings for the people. This spirit is not only a historical legacy, but also a precious wealth that contemporary young students should inherit and carry forward. In the journey of the new era, the majority of young students should deeply study the spirit of the Northeast Anti-Japanese Federation, draw strength from it, strengthen their loyalty and belief in the party, strengthen their own ideals and beliefs, and improve their party spirit.



Full Text Article



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Keywords: Party history education for college students; the spirit of the Red Resistance League; Facilitating

Introduction

History is the most vivid textbook, recording the past and wisdom of humanity. In 2021, marking the historic moment of the 100th anniversary of the founding of the Communist Party of China, General Secretary Xi Jinping proposed at the mobilization meeting for the education campaign on the Party's history the important directive of "learning history to understand principles, to increase faith, to honor virtue, and to act," pointing out the direction for the entire Party to carry out education on the Party's history. Subsequently, the General Office of the CPC Central Committee issued the "Opinions on Promoting the Normalization and Long-term Mechanism of the Education Campaign on the Party's History," further emphasizing the importance of education on the Party's history, especially integrating it into ideological and political courses in schools, making the Party's history an important resource for fostering virtue through education. Against the backdrop of the new era, carrying out education on the Party's history for the college student community not only helps them strengthen their ideals and beliefs, enhance historical confidence, but also guides them to establish a correct view of the Party's history and historical perspective, deeply understanding the Party's century-long journey of struggle and significant achievements. This is not only an important way to enhance the ideological and political quality of college students but also a valuable opportunity to strengthen their political identification, ideological identification, theoretical identification, and emotional identification with the leadership of the Communist Party of China.

Against the backdrop of the new era, higher education institutions have made many efforts in learning and researching the Party's history. These efforts have shown significant positive effects in cultivating outstanding talents with a sense of responsibility and mission, strengthening the political firmness of teachers and students, promoting the connotative development of schools, facilitating innovation in Party building work, and enhancing the quality of campus culture. Through systematic curriculum settings for the Party's history, colleges and universities can effectively improve students' theoretical literacy and political awareness, enabling them to deeply understand the Party's glorious journey and great achievements. Diverse practical activities on the Party's history, such as red culture theme exhibitions, lectures on the Party's history, and field visits, can enhance students' sense of experience and identification, stimulating their intrinsic motivation.^[1]By innovating methods of Party building work, such as using new media platforms for propaganda on the Party's history and organizing knowledge competitions on the Party's history, higher education institutions further strengthen the political firmness and Party spirit cultivation of teachers and students. By building a rich campus cultural system, such as red classic reading clubs and theme essay contests, the quality of campus culture is enhanced, creating a strong atmosphere for learning the Party's history. Therefore, higher education institutions should continue to attach great importance to education on the Party's history, making it one of the core contents of school work, and continuously exploring and innovating learning approaches and methods to achieve better learning outcomes. This not only helps to cultivate outstanding talents with noble sentiments and a strong sense of mission but also lays a solid foundation for the long-term development of the school.

The Contemporary Value of the Northeast Anti-Japanese United Army Spirit

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In the struggle of the Northeast Anti-Japanese United Army against the Japanese invaders, the soldiers demonstrated a patriotic spirit loyal to their country and bravely facing the national crisis. ^[2]This spirit, transcending time and space, continues to shine brightly in contemporary society, inspiring every Chinese son and daughter to contribute to the country's prosperity and thriving. It makes us deeply realize that individual fate is closely linked with that of the nation, and only by integrating personal aspirations into the overall development of the country can one write their own splendid chapter in the great journey of realizing the Chinese Dream.

The courage and heroism shown by the soldiers of the Northeast Anti-Japanese United Army in battle are precious spiritual treasures of the Chinese nation. In the harsh and challenging environment, they fearlessly persisted in the fight against Japanese aggression, demonstrating a spirit of perseverance and willingness to sacrifice. This spirit motivates people to pursue their dreams and goals, to forge ahead bravely without fear of difficulties and obstacles. ^[3]The spirit of unity and solidarity against foreign aggression shown by the soldiers during the Anti-Japanese War highlights the power of humanity uniting for a common cause. In the context of the deepening development of globalization, this spirit is of even greater practical significance, reminding people to cherish international cooperation and unity to jointly address global challenges.

The contemporary value of the Northeast Anti-Japanese United Army spirit encourages people to continue to carry forward the spirit of patriotism, heroism, hard work, and unity against foreign aggression in the context of the new era, contributing to the great rejuvenation of the Chinese nation and the realization of the Chinese Dream.

Problems in the Integration of the Northeast Anti-Japanese United Front Spirit with College Party History Education

The spirit of the Northeast Anti-Japanese United Army, as an important part of the spiritual genealogy of the Communist Party of China, still has certain deficiencies in the construction of educational and teaching resources. At present, the lack of systematic and authoritative textbooks, teaching cases, and multimedia teaching materials makes it difficult for teachers to fully and deeply explain the spirit of the Northeast Anti-Japanese United Army when teaching it. Therefore, it is necessary to further strengthen the development and integration of related teaching resources to ensure that teachers can accurately and systematically convey this valuable spiritual wealth to students, thereby better inheriting and promoting the spirit of the Northeast Anti-Japanese United Army.

1. Not strong in effectiveness

The integration effectiveness of the Northeast Anti-Japanese United Army spirit in college ideological and political education courses still needs further improvement. Many higher education institutions have incorporated the spirit of the Northeast Anti-Japanese United Army into the ideological and political education curriculum system, but in actual teaching activities, some

teachers still have certain deficiencies in organically combining the spirit of the Northeast Anti-Japanese United Army with the teaching content of ideological and political courses. This phenomenon has had a certain impact on students' in-depth understanding and mastering of the profound connotations of the spirit of the Northeast Anti-Japanese United Army. ^[4] The emergence of this issue may be closely related to teachers' teaching strategies, methods, and the arrangement and design of course content.

2. Insufficient integration

The integration of the Northeast Anti-Japanese United Army spirit with campus culture construction has not yet achieved the desired results. As an important bastion for cultural heritage and dissemination, higher education institutions should actively incorporate the spirit of the Northeast Anti-Japanese United Army into campus culture construction. By organizing a variety of campus cultural activities, such as special lectures, historical exhibitions, and artistic performances, students can be exposed to the influence and inspiration of the Northeast Anti-Japanese United Army spirit in their daily lives. However, some universities have not yet made sufficient efforts in this regard, which limits the dissemination and impact of the Northeast Anti-Japanese United Army spirit on campus.

3. The method of dissemination has not kept pace with the times

With the rapid development of information technology and new media, higher education institutions urgently need to keep pace with the times in the dissemination of party history education, continuously innovating and updating. However, some higher education institutions still adopt traditional methods and means in the dissemination of the Northeast Anti-Japanese United Army spirit, such as classroom teaching and paper teaching materials, and have not yet fully realized the deep integration and innovation with new media. This situation limits the effectiveness of the dissemination of the Northeast Anti-Japanese United Army spirit, making it difficult to stimulate students' interest and emotional resonance.

4. The joint efforts in education have not yet been formed

The integration of the Northeast Anti-Japanese United Army spirit with curriculum-based ideological and political education has not yet achieved the desired results. Curriculum-based ideological and political education, as an innovative teaching model, skillfully integrates ideological and political education into professional courses, not only imparting knowledge but also focusing on shaping the soul of students. It emphasizes guiding students to establish a correct worldview, outlook on life, and values during the process of learning professional knowledge, cultivating students' sense of social responsibility and mission. Through curriculum-based ideological and political education, students can more profoundly understand the social significance and value orientation behind professional knowledge, thereby achieving the sublimation of ideological and

moral development while growing professionally, laying a solid foundation for becoming comprehensive builders and successors of socialism with moral, intellectual, physical, aesthetic, and labor development. However, some higher education institutions still have certain deficiencies in the process of integrating the Northeast Anti-Japanese United Army spirit into curriculum-based ideological and political education, manifested as insufficient collaborative cooperation with other courses, thus affecting the significance of educational outcomes.

5. Insufficient emphasis on practical teaching

In the process of party history education in higher education institutions, theoretical teaching usually takes a dominant role, while practical teaching sessions are relatively few. Students lack opportunities to deeply understand the spirit of the Northeast Anti-Japanese United Army through personal experiences and practical activities. [5] When the spirit of the Northeast Anti-Japanese United Army is combined with party history education in higher education institutions, the insufficient emphasis on practical teaching sessions urgently needs to be highly focused on. By enhancing ideological understanding, optimizing teaching plans, strengthening resource integration, and improving evaluation mechanisms, this issue can be effectively addressed, promoting the in-depth development of party history education in higher education institutions.

Strengthen the integration of the spirit of the Northeast Anti-Japanese United Army with college party history education

The deep integration of the Northeast Anti-Japanese United Army spirit with the party history education in colleges and universities is an important strategic initiative to strengthen and improve ideological and political education for college students and to inherit the red gene in the new era. The deep integration of the Northeast Anti-Japanese United Army spirit with the party history education in colleges and universities is a long-term and arduous historical task. Through various approaches such as classroom teaching, practical teaching, campus cultural activities, and online education, the deep integration can be achieved. At the same time, it is also necessary to face the challenges and problems encountered during the deep integration process and adopt effective countermeasures and measures to address them.

1. Enhancing the timeliness of teaching

Through careful selection, the content of teaching is closely linked with the spirit of the Northeast Anti-Japanese United Army, including related historical events, touching personal stories, and important theoretical knowledge points. This approach aims to ensure that the content of teaching is highly targeted and timely, capable of stimulating students' resonance and interest. By learning about the spirit of the Northeast Anti-Japanese United Army, college students can gain a deeper understanding of the glorious history of the Party and the heroic deeds of revolutionary martyrs,

thereby enhancing their historical sense of responsibility and mission, and contributing to the realization of the Chinese Dream of the great rejuvenation of the Chinese nation.

2. Strengthening ideological integration

Higher education institutions should be committed to strengthening the education and dissemination of the spirit of the Northeast Anti-Japanese United Army. Through organizing special lectures, exhibitions, and cultural performances, among other forms of activities, they can enhance teachers' and students' understanding and comprehension of the spirit of the Northeast Anti-Japanese United Army. At the same time, they should use campus radio, television networks, and other media to regularly push content related to the spirit of the Northeast Anti-Japanese United Army, creating a rich red cultural atmosphere. Universities should also integrate educational resources related to the spirit of the Northeast Anti-Japanese United Army, such as historical documents, image materials, video archives, and physical exhibits, to provide substantial support for teaching activities. In addition, by establishing cooperative mechanisms with local governments and memorial halls, they can jointly develop practical teaching resources, creating more learning and experiential opportunities for students.

3. Establishing effective communication methods

Integrate the spirit of the Northeast Anti-Japanese United Army into ideological and political classrooms, incorporating relevant content into the ideological and political course and party history course systems of colleges and universities. At the same time, moderately incorporate elements related to the spirit of the Northeast Anti-Japanese United Army into professional course teaching, such as history, literature, and art, to enrich teaching content and expand students' horizons. Invite experts and scholars, descendants of the Anti-Japanese United Army, or historical witnesses to campus to hold special lectures or seminars, sharing heroic deeds and touching stories of the Northeast Anti-Japanese United Army, strengthening students' historical sense of responsibility and mission. Integrate the spirit of the Northeast Anti-Japanese United Army into the construction of college campus culture, creating a rich red cultural atmosphere through the organization of cultural performances, speech contests, essay contests, and other activities.

4. Establishing correct values

The dissemination of the Party's history should comprehensively and objectively present the Party's development process and achievements. It is essential to avoid spreading only one-sided or selective information, and it is absolutely not allowed to distort or alter historical facts. The Party's history should be fully presented, including its struggle in various historical stages, the lessons learned, and the great achievements made, to guide the public in correctly understanding the Party's history and to strengthen their belief and loyalty to the Party. The core socialist values, as the concentrated expression of contemporary Chinese spirit, embody the common value goals pursued

by all the people. In the dissemination of the Party's history, we should actively promote the core socialist values, inherit and carry forward the red tradition, and maintain the continuity of red culture. By telling the stories of the Party's history and the deeds of heroes, we can stimulate the public's patriotic feelings, national spirit, and the spirit of the times, guiding the public to establish correct worldviews, life views, and values. In the process of disseminating the Party's history, we should pay attention to the methods and effects of dissemination. At the same time, we should also pay attention to the effects of dissemination, promptly collect feedback information, continuously optimize the means and content of dissemination, and ensure that the dissemination of the Party's history can achieve practical results.

5. Integrating party history practical education

The integration of the spirit of the Northeast Anti-Japanese United Army into college party history education constitutes a key link in party history practical education. This integration not only promotes college students' profound understanding of the Party's history but also further stimulates their patriotic feelings and national spirit. The integration of the spirit of the Northeast Anti-Japanese United Army with college party history education enables college students to have a deeper understanding of the Party's history, enhancing their party spirit cultivation and patriotic emotions. Through the development of practical teaching and campus cultural activities, college students exercise their willpower in practice and cultivate the spirit of hard work and unity and cooperation.

The Innovation and Consolidation of the Spirit of the Northeast Anti-Japanese United Army in the Process of Studying Party History

By utilizing virtual reality technologies, such as Virtual Reality (VR) and Augmented Reality (AR), we can recreate the battle scenes and heroic deeds of the Northeast Anti-Japanese United Army, allowing learners to immerse themselves in that challenging historical period. Through platforms like digital museums and online memorials, we can digitize precious cultural relics and historical materials of the Northeast Anti-Japanese United Army, making learning accessible anytime and anywhere for learners.

Organize learners to delve into the historical documents of the Party and related materials of the Northeast Anti-Japanese United Army, to deeply understand the background of the formation, historical significance, and value connotations of the spirit of the Northeast Anti-Japanese United Army. By innovating and strengthening methods of studying Party history, we can make Party history education more vivid, interesting, and targeted, promoting the in-depth development of Party history education. The spirit of the Northeast Anti-Japanese United Army, as an important part of red culture, helps to inherit and promote red culture and enhance national pride and cohesion through innovative and strengthened methods of studying Party history. The innovation and consolidation of the spirit of the Northeast Anti-Japanese United Army in the process of studying

Party history is a continuous and in-depth process that requires constant innovation in learning methods, consolidation of learning outcomes, and a profound understanding of its significant importance. Only in this way can we ensure that this precious spiritual wealth shines with new brilliance in the new era, providing a powerful spiritual impetus for the great rejuvenation of the Chinese nation.

Conclusion

Colleges and universities should actively explore and establish a long-term and effective mechanism that integrates the education of party history with the teaching of ideological and political theory courses, dedicated to creating a normalized and long-term system for party history education that is suitable for the college student community. It is essential to fully motivate the enthusiasm and initiative of both teachers and students, striving to promote interactive communication between the teaching parties, achieving mutual growth in teaching. At the same time, the educational value of party history education should be deeply explored, leveraging its positive role in education, ensuring that party history education can continuously inject new vitality into the teaching of ideological and political theory courses. In addition, the extensive audience base and coverage of ideological and political theory courses and course-based ideological and political education should be fully utilized to further deepen and expand the connotation and extension of party history education.

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Conflict of Interest

The authors declare no conflict of interest.

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Research on the Basic Concepts, Core Connotations and Theoretical Contributions of Xi Jinping's Important Discourses on China's Sports Work in the New Era

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Abstract

General Secretary Xi Jinping's important discourses on China's sports work have important guiding significance and practical value for promoting the high-quality development of China's sports industry and accelerating the construction of a leading sporting nation. Therefore, this study systematically sorted out and summarized General Secretary Xi Jinping's basic ideas on the development of China's sports work through the method of literature and logical analysis. These ideas always revolve around the two basic principles of "upholding the party's overall leadership over sports" and "adhering to the people-centered approach." The core connotation of Xi Jinping's thought on sports can be summarized as follows. Firstly, speed up building China into a leading sporting nation. Secondly, deepening reform and innovation in sports will drive the high-quality development of China's sports industry. Thirdly, implement China's strategic goal of national fitness campaigns. Lastly, promote the upgrading of international sports and cultural exchanges and cooperation. The research results show that General Secretary Xi Jinping's important expositions on sports work not only pointed out the development direction and provided fundamental guidance for the development of China sports industry, but also clearly emphasized the important position of sports in the national development strategy, and adhered to the people-centered development concept to promote the implementation of the national strategy of national fitness, injecting new vitality and connotation into China's construction of a sports power and the modernization and high-quality development of the sports industry. It is of great significance for building China into a leading sporting nation, and giving sports a new strategic orientation and development direction in the new historical conditions.



Full Text Article



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Keywords: Xi Jinping, Sports Undertakings, A Leading Sporting Nation, People-Centered Approach

Introduction

Published by the General Administration of Sport of China in 2022, "In-depth Study of Xi Jinping's Important Expositions on Sports" systematically sorts out General Secretary Xi Jinping's strategic thinking on sports. From the perspective of national strategy and the overall situation, General Secretary Xi Jinping put forward important expositions on sports power, national fitness, sports industry development, youth sports training and international sports exchanges, which pointed out the development direction for China's sports industry ^[1]. The General Secretary emphasized that sports are an important part of the rejuvenation of the Chinese nation, and promoting national fitness is the core content of the Healthy China strategy. The sports industry is an important economic component to stimulate domestic demand and promote consumption, and youth sports are related to the future of the country. In addition, he also proposed to demonstrate the country's soft power through participation in international sports exchanges and promote China's emergence on the world sports stage. This book not only clarifies the strategic vision of realizing a sports power, but also outlines a clear path for achieving national health, industrial revitalization and international cooperation ^[2].

In addition, Xi Jinping believes that sports are not only a way to enhance health and entertain the body and mind, but also an important manifestation of national prosperity, national rejuvenation and people's happiness ^{[3][4]}. These important discussions not only point out the development direction of China's sports industry, but also provide important guarantees for the comprehensive construction of a modern socialist country. Therefore, it is highly necessary to systematically study and implement these important statements on sports to better understand and grasp the direction and path of sports development in the new era and ensure that the sports industry always moves forward on the right track ^{[5][6]}. At the same time, it profoundly reveals the nature and basic laws of China's development in the field of sports. These discussions are not only full of profound strategic thinking, but also contain rich ideas and guiding principles, providing the most fundamental guidelines and action guides for our sports reform and development in the new era.

Therefore, this study comprehensively and systematically sorted out Xi Jinping's basic ideas and core connotations on sports, and revealed its spiritual essence and practical requirements with the hope of providing strong theoretical support and basis for promoting the realization of the goal of building China into a leading sporting nation in the new era.

The Basic Concepts of Xi Jinping's Important Discourses on China's Sports Work in the New Era

1 Adhere to the Party's Overall Leadership Over Sports

One of the core concepts of Xi Jinping's important discourses on sports is to uphold the Party's overall leadership over sports. This concept embodies the Party's strategic guidance and policy support in sports work, and aims to promote the comprehensive development of sports, promote national health, and enhance the country's overall national strength ^[7]. Always adhering to the Party's overall leadership is not only about establishing an organizational management system, but also an important guarantee and driving force for integrating sports into the overall national development and serving the people. Upholding the Party's overall leadership over sports also lays a

solid foundation for the healthy and prosperous development of China's sports industry, and is a fundamental guarantee for promoting the healthy development of sports in the new era.

In the development of China's sports industry, adhering to the leadership of the Party is a fundamental principle that provides robust political and organizational guarantees for the advancement of sports. This leadership ensures that sports initiatives are not only aligned with the overall national development strategy but also deeply rooted in the interests and aspirations of the people [8]. By integrating sports into broader national priorities, the Party's leadership establishes a framework where the goals of the sports industry complement economic growth, cultural enrichment, social cohesion, and public health improvement. Adherence to Party leadership is pivotal in steering the sports industry in the right direction, laying the foundation for the remarkable achievements China has attained in recent years. The Party's leadership fosters unity and synergy across various sectors, allowing the effective coordination of resources, policy-making, and implementation at all levels of society. This holistic approach enables the integration of governmental, corporate, and community resources, leveraging their combined strength to propel the sports industry forward. Moreover, Party leadership actively mobilizes societal support and participation in sports development. Through its influence, the Party nurtures a culture that values sports as a vital component of national progress, inspiring a collective effort from individuals, organizations, and institutions to contribute to the industry's growth. This alignment of resources and societal engagement ensures the sustainability and continuous innovation of China's sports industry, solidifying its role as a cornerstone of the country's comprehensive development strategy.

Therefore, in the practice of sports work, we must always adhere to the party's overall leadership unswervingly and constantly strengthen and improve the party's leadership style and methods. We ought to further improve the leadership system and working mechanism of sports work, clarify the responsibilities and tasks of Party committees and governments at all levels, and ensure that sports is given more attention and receives better development. At the same time, in the process of promoting the development of sports, we should also attach great importance to and give full play to the role of the party organization, and stimulate the enthusiasm and creativity of the majority of sports culture workers to gather a strong joint force. In addition, adhering to the party's overall leadership over the sports undertakings and giving full play to the institutional advantages of concentrating resources to accomplish major events can better coordinate and promote major sports events and activities, and showcase the national image and national spirit. In addition, in the process of developing China's sports industry, we must pay attention to deepening international exchanges and cooperation. Through mutual learning, we can better broaden our horizons and draw on the wisdom and strength of global sports development, which can help to enhance the international influence of China's sports.

In the process of promoting the healthy development of sports in the new era, China must always adhere to the core concept of the Party's overall leadership over sports. Only in this way can we better grasp the development direction and goals of sports and continuously promote new and greater achievements in sports, which will not only help improve the overall health level of the people, but also promote the high-quality development of China's sports.

2 Adhere to the People-Centered Development Philosophy

Adhering to the people-centered development philosophy is the fundamental principle for the development of China's sports industry. The development of China sports in the new era is no longer limited to the glory of competitive sports, but pays more attention to meeting people's demands for a better life and promoting their all-round development ^{[9][10]}. First, putting the people at the center means that sports undertakings should always prioritize the interests of the people. This means that when formulating sports policies and planning sports development, the actual needs and expectations of the people should be fully taken into account. For example, the promotion of the national fitness strategy is based on the pursuit of a healthy life for the people, providing a variety of fitness methods and ways to enable more people to participate in physical exercises ^[11]. Secondly, putting the people at the center also requires to attach great significance to the subjective status of the people in sports undertakings. People are the main participants of sports, serving as an important driving force for the development of sports. Therefore, in sports work, we must respect the wisdom of the people, listen to their opinions and suggestions extensively, encourage them to play a greater role in the development of sports, and form a new situation of sports development with the participation of the whole society. Finally, Xi Jinping's people-centered development philosophy profoundly points out that the ultimate goal of development is to achieve the happiness of the people and the prosperity of the country ^[12]. Under the guidance of this philosophy, the development of sports has also been given a new mission and connotation. Sports are not only competitive sports for honors, but also an important means to enhance the personal development of the nation.

General Secretary Xi Jinping, standing at the strategic height of national development, reviewed the brilliant achievements of sports made in New China over the past decades and profoundly expounded the important concept of "When national sports thrive, China thrives". He clearly pointed out that there is a close logical relationship between sports development and national prosperity, national rejuvenation and people's happiness. Sports not only plays an important role in economic prosperity, but also plays significant parts in inspiring national spirit, enhancing people's physical fitness as well as enriching people's lives ^[13].

Therefore, in future work, we will firmly adhere to the idea of putting people at the center, take it as the goal to guide the development of sports, and continuously deepen our understanding and practice of this concept ^[14]. This not only clarifies that sports should be people-oriented and put people's health first, but also fully reflects the party's determination to always stand on the side of the people, bravely shoulder political responsibilities, and uphold the fundamental purpose of serving the people wholeheartedly. In the process of developing sports, the party not only pays attention to improving the physical fitness of the people, but also strives to improve the people's sense of happiness and quality of life, ensuring that sports are truly used by the people and serve the society. Through this people-oriented policy, the party has demonstrated its high attention and unremitting pursuit of the welfare of the people, and also demonstrated its firm commitment to always serving the people.

The Core Connotations of Xi Jinping's Important Discourses on China's Sports Work in the New Era

1 Accelerate the Process of Building China Into a Leading Sporting Nation

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In the report of the 19th National Congress of the Communist Party of China, Xi Jinping unveiled the grand goal of building China into a leading sporting nation. This goal was proposed based on the inheritance and development of the sports thoughts of previous party and state leaders ^[15], combining with the characteristics of the times. This thought not only deepened the understanding of the close connection between sports and national governance and social development, but also further endowed the concept of "a leading sporting nation" with deeper connotations ^[16]. The reform and development in realizing the goal of "building China into a strong sporting nation" has become China's top priority, and it is also an important window and platform for realizing national rejuvenation and demonstrating the country's comprehensive strength and cultural soft power. This strategic move is not only related to the prosperity of sports, but is also an important part of China's overall national sports development strategy. Under this grand goal, China must deeply understand and implement the connotation of Xi Jinping's sports discourse to better promote the vigorous development of China's sports industry.

In the process of guiding the development of China's sports industry, Xi Jinping's discourses on sports work focus on solving the imbalances and other problems faced by China's sports undertakings. Attaching great importance to the central role of the people in sports and taking the people's desire for a better life through sports as an unswerving goal also points out the direction for the development of China's sports industry ^[17]. In addition, in the report of the 20th National Congress of the Communist Party of China, General Secretary Xi Jinping clearly proposed to promote the transformation of our country from a "sports power" to a "sports powerhouse" and move faster to build China into a country strong in sports. At the same time, we should continue to enhance the overall strength of China's competitive sports, as they can help display our sports strength and level, inspire national pride and consolidate national spirit ^[18]. Therefore, it is necessary to focus the strength of talent policies on reserve talents in competitive sports, optimize training methods and means, and improve the coaching level and professional quality of coaches. At the same time, we must actively participate in international sports events and exchange activities, showcase the style and spirit of Chinese athletes, and enhance China's influence and status in the international sports arena.

Finally, it must be emphasized that accelerating the construction of a leading sporting nation is a long-term and arduous task. The realization of this goal requires active participation and unremitting efforts of every part including the government, society, schools and other aspects. Only in this way can we realize the dream of building China into a leading sporting nation and contribute to the great rejuvenation of the Chinese nation.

2 Deepening Reform and Innovation Will Drive the High-Quality Development of China's Sports Industry

Promoting sports reform, innovation and development occupies a pivotal position in Xi Jinping's discourse on sports. It is not only a core component of the ideological system, but also the key to achieving the grand goal of building a strong sports country. Xi Jinping stressed that "we should accelerate the pace of sports reform and innovation, update sports concepts, and draw on useful foreign experience." ^[19]. At the new starting point of developing China's sports industry, we must deeply understand and resolutely implement the concept of "sports innovation and reform". Only in

this way can China's sports development take reform and innovation as its driving force and grasp the pulse of the times.

Sports reform and innovation is a powerful driving force for the development of China's sports industry. Xi Jinping pointed out that “We must deepen sports reform, update sports concepts, and promote the coordinated development of mass sports, competitive sports, and the sports industry.”^[20] When concepts are renewed, the pace of emancipation should follow closely. Accordingly, deepening sports reform should always be carried out steadily by adhering to the principle and method of seeking truth from facts^[21]. In the new era, China's sports development needs to constantly innovate sports development concepts, methods and approaches to adapt to social development and changes in the needs of the people. This requires us to abandon traditional backward concepts and practices, and have the courage to explore and practice a new path for sports development that suits China.

Consequently, in the process of promoting sports reform and innovation, we must first focus on giving play to the role of government, market and society. The government should strengthen macro-guidance and policy support for sports, providing a good policy environment and institutional guarantee for sports reform and development. While promoting sports reform, we are supposed to give full play to the decisive power of the market in resource allocation, further stimulate the vitality and creativity of the sports market, thus effectively promoting the high-quality development of the sports industry. Secondly, we should strengthen the enthusiasm of social organizations and individuals to participate in sports affairs, and create a good atmosphere for the whole society to emphasize on and support the development of sports. In addition, sports reform and innovation must pay attention to its mass and popularization. Therefore, sports reform and innovation should be carried out closely around the needs of the people, popularize mass sports activities and national fitness, and improve the people's sports quality and health level. Finally, promoting sports reform and innovation also requires strengthening exchanges and cooperation at home and abroad, actively expanding channels for foreign sports exchanges and cooperation, showing China's sports style and cultural charm, and promoting the internationalization of China's sports cause by learning and drawing on international advanced training methods and technical means.

In addition, in the process of promoting reform and innovation in Chinese sports, strengthening sports publicity and education is a vital link. Only by enhancing the understanding and support of sports in the whole society can we form a good sports culture atmosphere and lay a solid social foundation for reform. Sports reform and innovation are not only an inevitable requirement for the development of Chinese sports in the new era, but also an important measure to meet the challenges of the new era and meet the diverse sports needs of the people. We should fully implement General Secretary Xi Jinping's important expositions on sports, firmly promote the confidence of sports reform and innovation, continue to forge ahead, and accelerate the deep innovation in the field of sports through solid and effective reform measures. Only in this way can we continue to provide strong support for the goal of becoming a sports power and make greater contributions to the sports cause of the country and the people.

3 Implement China's Strategic Goal of National Fitness Campaigns

The implementation of the national fitness campaigns is an important component of Xi Jinping's discourse on sports undertakings. This strategy is deeply rooted in the people, and its core concept is to improve their physical fitness and health level. It is not only a positive action of the Chinese government in response to the people's yearning for a healthy life, but also a concrete manifestation of its deep concern for the health of all people. Xi Jinping urged stronger efforts to “strengthen national fitness campaigns, popularize extensive fitness-for-all activities, and promote the Healthy China Initiatives” [22]. It can be said that the implementation of the national fitness strategy is a vivid demonstration of the Chinese government’s strong protection of the people’s health rights and interests. It not only helps to enhance the overall physical fitness of the people, but also plays a positive role in promoting social harmony and progress.

Under the guidance of General Secretary Xi Jinping in implementing the strategic goal of national fitness campaigns, government departments have actively responded and issued important documents such as the "13th Five-Year Plan for Sports Development" and the "Healthy China 2030" Plan. In order to achieve the goal of national fitness, the government has taken a series of powerful measures and formulated policies and guidelines to further deepen and enrich national fitness and national health. The strengthening of the national fitness campaigns is not only related to the people's happy life and the future of the nation, but is also a basic task for the development of sports [23]. National fitness campaigns has become an important livelihood project, laying a solid foundation for completing the building of a moderately prosperous society in all respects.

Xi Jinping emphasized that “national fitness is the basis and guarantee for all people to strengthen their physical fitness and live a healthy life, and people's physical health is an important connotation of building a moderately prosperous society in all aspects.” [24]. With the promotion of the national fitness strategy, the fitness awareness of the general public has been continuously enhanced, and the enthusiasm for participating in physical exercises has been significantly improved [25]. This not only helps to improve personal physical fitness and health level, but also injects new vitality into promoting economic and social development. By comprehensively strengthening national fitness campaigns, the Chinese government is committed to creating better fitness conditions and environment for the people, improving the physical fitness and quality of life of the whole people, and contributing to the realization of the Chinese dream of national rejuvenation. In the meantime, this also provides valuable experience and inspiration for countries around the world, making positive contributions to promoting the development and progress of global sports.

4 Promote the Upgrading of International Sports and Cultural Exchanges and Cooperation

Strengthening cultural exchanges in sports between China and foreign countries is also an important component of Xi Jinping's discourses on sports, which reflects China's attitude towards opening up to the outside world and the active pursuit of international sports cooperation. The "Belt and Road" initiative proposed by General Secretary Xi Jinping profoundly demonstrates China's responsibility and commitment as a major country, and provides innovative ideas for building a new type of international relations. In this grand blueprint, the "Belt and Road" initiative has greatly promoted connectivity among countries around the world, in which sports plays an indispensable role. In the current era of sports globalization, China has actively carried out sports exchanges, supported countries along the Belt and Road to host major international sports events, promoted the

development and progress of world sports, and assisted neighboring countries in building sports facilities, all of which reflect the deepening of exchanging ideas with foreign countries [26]. Strengthening sports and cultural exchanges between China and foreign countries is of great significance in promoting world peace and development, enhancing China's international image and promoting Chinese sports culture. Therefore, we should actively respond to Xi Jinping's call on sports undertakings, continuously strengthen sports and cultural exchanges between China and foreign countries, and contribute to promoting the building of a community with a shared future for mankind.

In the new era, the Party Central Committee, with Xi Jinping at its core, has made sports an even more important avenue of national diplomacy, as strengthening humanistic exchanges in sports between China and foreign countries can help promote world peace and development. It's worth noting that Xi Jinping's diplomatic philosophy in the new era is not only committed to promoting the development of the sports community, but also actively seizes the opportunities brought about by the development of the sports community, aiming to spread China's peaceful diplomatic philosophy through sports and cultural exchanges between China and foreign countries [27]. Sports, as a global language, has the ability to transcend national borders, races, religions, and other differences. Thereby, sports events, cultural exchanges, and other activities can help alleviate international tensions. First of all, sports and cultural exchanges can promote economic development and social progress, and bring more cooperation opportunities and development space to all countries. Secondly, strengthening sports and cultural exchanges between China and foreign countries will help enhance China's image and influence on the international stage. As the world's largest developing country, China is actively promoting the comprehensive development of sports. Finally, by participating in international sports events and hosting large-scale sports events, China has demonstrated its sports strength and level to the world, while also conveying its cultural concepts and values. This not only helps to enhance China's soft power, but also earns more international praise and support for China.

General Secretary Xi Jinping attaches great significance to sports exchanges between China and foreign countries. When listening to a report on the preparations for the Beijing Winter Olympics and Paralympics, he clearly pointed out that "We must take the initiative to deepen cooperation with international sports organizations and listen carefully to their valuable suggestions on venue construction, event organization, talent training, etc., so as to accumulate more rich experience in hosting games." [28]. Therefore, in the process of strengthening sports and cultural exchanges between China and foreign countries, China needs to adopt a variety of measures and means. On the one hand, the government should increase its investment and support for sports diplomacy, actively participate in international sports events and organize activities, strengthen sports exchanges and cooperation with various countries, and showcase the fruitful results of China's national fitness and the good image of China. On the other hand, the private sector should also actively carry out various forms of Chinese sports activities and Chinese cultural exchange activities to build a broader platform for sports and cultural exchanges between China and foreign countries. At the same time, we should attach great importance to cultivating high-level and high-quality sports talents with international vision and excellent cross-cultural communication capabilities. These measures are crucial to promoting sports and cultural exchanges between China and foreign countries.

The Theoretical Contributions of Xi Jinping's Important Discourses on China's Sports Work in the New Era

First of all, it provides a fundamental guideline for the development of China's sports in the new era. General Secretary Xi Jinping's important expositions on China's sports undertakings have pointed out the direction for the sustainable development of the sports industry. Specifically speaking, we are supposed to lay stress on the achievements and honors in competitive sports and the popularization and improvement of mass sports. We should also recognize the role of sports in improving the quality of the nation, which has promoted the comprehensive and coordinated development of China's sports industry.

Secondly, it strengthens the strategic position of sports in national development. Under the guidance of General Secretary Xi Jinping, China's national fitness campaigns has been elevated to a national strategy, and various forms of national fitness activities have received unprecedented attention and development. This not only reflects the state's support and guidance for sports, but also highlights the positive role of sports in promoting social harmony and enhancing national cohesion. Therefore, it can be said that Xi Jinping has successfully promoted the strategic position of sports in China's national development, laying a solid foundation for building China into a leading sporting nation and promoting comprehensive development.

Moreover, it remains committed to the people-centered philosophy of development. Xi Jinping's discourse on sports distinctly places people at the center of sports development, with the promotion and fulfillment of everyone's all-round development as the primary task and ultimate destination of sports undertakings. This is not only a strong practice of implementing the strategic goal of national fitness campaigns, but also provides solid support and an effective path to improve the quality of life and happiness of the Chinese people. At the same time, adhering to the party's overall leadership over sports ensures that China's sports industry moves in the right direction.

Finally, it has strengthened the national fitness campaigns in China and deepened China's international sports cooperation. Under the guidance of Xi Jinping's important discourses on sports, the extensive fitness-for-all activities has been promoted, and international sports cooperation has been further deepened. This concept is not only committed to improving the health literacy and quality of life of the people, but also injected new vitality and impetus into the modernization process of China's sports industry.

Conclusions

General Secretary Xi Jinping's exposition on China's sports work in the new era has constructed a comprehensive, systematic and scientific theoretical system, which provides a clear direction and strategic policy for China to build a sports power. Its core concept is to adhere to the overall leadership of the Party, emphasize the development concept centered on people's health, clearly set the goal of improving the health quality of the whole people, and promote the deep integration of national fitness and health to form a comprehensive health system. This theoretical system covers all aspects of China's sports work, not only laying a solid foundation for the vigorous development of China's sports industry, but also guiding the steady progress of China's construction of a sports

power in the new era. As a driving force, General Secretary Xi Jinping's theoretical system on China's sports work has continuously promoted China's sports industry to a new level, effectively realized the health of the whole people and comprehensive development, and thus led China's sports industry to achieve a higher level of progress in the new era. This series of efforts will effectively improve the health level of the Chinese people, promote social harmony, promote economic development, and ultimately achieve the great goal of building China into a leading sporting nation.

Conflicts of Interest

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Function of traditional culture in contemporary society: A case of Teochew opera in Malaysia

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Abstract

This article examines the function of Teochew opera in Malaysia and its significance for society, groups, and individuals. The study uses qualitative methods such as fieldwork, participant observation, and interviews to explore how this traditional art form maintains its relevance in a rapidly modernising society. The findings indicate that Teochew opera in Malaysia is not merely entertainment but serves multiple purposes: it serves as a vehicle for cultural identity preservation and amoral education within Malaysian Chinese communities and plays a crucial role in religious practices. Despite challenges such as declining interest among younger generations and the pressures from contemporary entertainment trends, Teochew opera remains an important cultural practice. It fosters intergenerational connections and sustains the community's traditional values, contributing to the ongoing vitality of Malaysian Chinese cultural heritage.



Full Text Article



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Keywords: Malaysian Chinese culture; Teochew opera; traditional Chinese music; Cultural function and significance

Introduction

Teochew opera, a traditional Chinese theatrical art form, has a long and storied history, with cultural roots extending back a thousand years to the Song Dynasty (960–1279 AD) in China (Wu & Lin, 2015). Originating in the Chaoshan region of Guangdong Province, this unique form of opera evolved within a distinctive cultural and linguistic context, shaped by the Teochew people, a sub-ethnic group of Han Chinese. Over the centuries, Teochew opera has developed into a highly specialised expression that reflects the values, traditions, and social realities of the Teochew community.

Teochew opera is distinguished by its intricate blend of performance styles, vocal techniques, and instrumental accompaniment. Its music draws heavily on traditional Teochew folk melodies, with a unique tonal structure that reflects ancient Chinese music theory. Performances often feature a range of traditional Chinese instruments, such as the gong, yehu, and pipa, which create a distinctive sound ensemble that enhances the emotional and narrative depth of the stories being told.

The vocal style, often sung in actual falsetto switch and the Teochew dialect, adds authenticity and challenges performers to convey complex emotions. The use of the regional dialect also serves as a critical link to the Teochew identity, as the subtleties of the language play an essential role in shaping the performance's dramatic impact. Thematically, Teochew opera encompasses a broad spectrum of stories drawn from Chinese classical literature, historical tales, folklore, and mythology. Common themes include loyalty, filial piety, and moral integrity—core Confucian values that have long permeated Chinese culture. The art form also incorporates aspects of local religious rituals and practices, often performed during temple fairs, festivals, and communal celebrations, reflecting its deep connection to the community's spiritual life. In this way, Teochew's opera serves as a source of entertainment and a vehicle for transmitting cultural values, shared memories, and social norms across generations (Lin, 2019).

As Teochew people migrated from southern China, particularly during the 19th and early 20th centuries, they carried their traditions. Teochew immigrants, especially those who settled in Southeast Asia, played a significant role in preserving and propagating their cultural practices abroad. Malaysia, in particular, became a vibrant centre for the Teochew diaspora, where communities maintained strong ties to their ancestral heritage (Lai, 1993). Teochew opera was one of the most important cultural exports, serving as a means for immigrants to preserve their identity in a foreign land. In Malaysia, the opera has become a cultural cornerstone, performed during Chinese festivals, religious ceremonies, and community events, where it functions not only as entertainment but also as a crucial cultural link between generations of Chinese Malaysians and their Teochew roots (Kang, 2005; Lin, 2023).

However, despite its historical and cultural significance, Teochew opera's role in contemporary Malaysian society remains underexplored in academic literature. Like other traditional practices, the art form faces challenges in maintaining its relevance in a rapidly modern society. The rise of modern entertainment forms and the declining use of the Teochew dialect among younger generations have contributed to its waning popularity. The shift towards a more globalised culture has also weakened traditional practices, including Chinese operatic art forms. In Malaysia, where diverse ethnic groups and cultural influences coexist, the preservation of Teochew opera faces competition from more dominant cultural narratives, often relegating it to the periphery of national cultural discourse.

Considering this context, it is essential to examine how Teochew opera in Malaysia has adapted to these changes, its current roles within the community, and its importance as a cultural medium amidst the forces of modernisation and globalisation. Without a deeper understanding of these elements, Teochew opera risks becoming a cultural relic rather than a living, evolving tradition. The study seeks to elucidate the role of Teochew opera in Malaysian society and the significance it holds for various groups and individuals.

Methods

This study employs a qualitative research design to investigate the functions and significance of Teochew opera in Malaysia. The qualitative approach is particularly suitable for this study as it facilitates an in-depth examination of the lived experiences, cultural practices, and community perspectives associated with Teochew opera. By engaging with practitioners, audience members,

and cultural experts, this research aims to capture the complex and nuanced role that Teochew opera plays in Malaysia's multicultural landscape. The focus is not only on understanding the functions of Teochew opera but also on the emotional and symbolic meanings it holds for the Teochew community and its audiences.

The research sites were Penang and Kuala Lumpur, Malaysia, where the researcher conducted year-long fieldwork from December 2022 to December 2023 to examine local approaches and efforts to sustain Teochew opera. The site selection prioritises the frequency of Teochew opera performances. At the beginning of the study, the researcher contacted the agent of the Lao Yu Tang Teochew Opera Troupe in Malaysia. Initial inquiries revealed more frequent Teochew opera performances in Penang, totalling 86 performances hosted by Lao Yu Tang from January to September 2022, with 67 occurring in Penang. These performances were primarily held on gods' birthdays, such as the Kwun Yum, Mazu and Tien Kung; and during traditional Chinese festivals, including the Hungry Ghost Festival (Jiang, personal communication, September 11, 2022). Additionally, the researcher communicated with Ling Goh, a cultural bearer of Teochew opera in Penang, who noted that Teochew opera is performed not only during rituals and traditional festivals but also at Malaysian cultural festivals. Goh mentioned that she is often invited to Kuala Lumpur to give cultural presentations of Teochew opera (Goh, personal communication, September 10, 2022).

The study used participant observation and semi-structured interviews for data collection. Ethnographic participant observation was conducted during Teochew opera performances and rehearsals, involving attendance at both formal events, such as cultural festivals, and informal settings, including temple gatherings and rehearsals. The focus was on observing interactions between performers and audiences, the preparation involved in staging performances, and the opera's role within communal rituals. Semi-structured interviews were conducted with a diverse range of participants, including Teochew opera performers, cultural scholars, community leaders, and audience members. The interviews aimed to explore participants' personal experiences with Teochew opera, its role in their lives, and their views on its cultural and social significance. The study is designed to span 12 months, encompassing three key phases, as shown in Table 1.

Phase	Duration	Target
Preliminary research and networking	1 December 2022 to 28 February 2023	This phase involves reviewing existing literature, identifying key stakeholders, and establishing connections with local Teochew opera troupes, cultural organisations, and community leaders. Initial field visits were conducted to each research site to gain an understanding of the local context and refine the research questions.
Data collection	1 March to 31 August 2023	In this phase, qualitative data collection was carried out through interviews and participant observation. This period was used to attend Teochew opera performances, interview performers, organizers, and audience members, and collect oral histories from community elders. The data collection took place during significant cultural events such as Chinese New Year, the Hungry Ghost Festival, and temple fairs, where Teochew opera is traditionally performed.

Data analysis and write-up	1 September to 1 December 2023	The final phase was focused on the thematic analysis of the collected data, synthesizing findings, and drafting the final article. Data coding and analysis were iterative, allowing for adjustments and refinements in the interpretation of findings as new insights emerged.
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Table 1. Research schedule.

This study conducted a comprehensive analysis of the function and significance of Teochew opera in Malaysia, using Merriam’s (1964) theory of the functions of music as a framework. Merriam’s theory, which identified ten distinct roles that music played across different cultures (as shown in Table 2), provided a valuable lens for examining how Teochew opera had contributed to the Malaysian context’s cultural, social, and individual experiences. The study explored how these functions had manifested within the traditional performances, rituals, and community practices associated with Teochew opera, offering insights into its enduring cultural relevance and evolving role in Malaysian multicultural society.

Function	Description
Emotional Expression	Music serves as an outlet for the expression of emotions, both individual and collective
Aesthetic Enjoyment	Music provides a form of artistic and aesthetic pleasure to both creators and listeners
Entertainment	It serves to entertain individuals, often in social gatherings or for personal enjoyment
Communication	Music can convey messages or express ideas, functioning as a medium for non-verbal communication
Symbolic Representation	It represents cultural symbols, ideas, or values through sound
Physical Response	Music often induces physical reactions like dancing, moving, or clapping
Enforcing Conformity to Social Norms	It reinforces accepted cultural and social values through lyrics, themes, or rituals
Validation of Social Institutions and Religious Rituals	Music is often used in ceremonies to validate and reinforce social and religious practices
Contribution to the Continuity and Stability of Culture	Through tradition and oral transmission, music helps preserve and maintain cultural identity
Integration of Society	Music fosters social bonding, creating a sense of unity and shared identity within groups

Table 2. Music function theory. (Source: Merriam, 1964)

Results and Discussion

Teochew opera functions differently in Malaysian society, depending on the context in which it is used. Based on Merriam's (1964) musical functions, the actual functions of Teochew opera are divided into communication with the gods, entertainment and edification, retrospective review of collective memory, and construction of identity.

Communication with the Gods

The Malaysian Chinese achieve communication with the gods through the performance of Teochew opera during rituals, which is a concept of music connecting the human and divine realms (乐能通神) that has been passed down from the primitive rituals of ancient China (Wang, 2006). Notably, the music here refers to a musical behaviour associated with performativity, embodied in the combination of music and dance, not just singing or instrumental playing. However, this musical and performative function is not unique to the Chinese, as almost all kinds of religious activities are accompanied by music, such as Hymns in Christianity, Sufi Music in Islam, and Buddhist music. Thus, there seems to be a consensus on the ability of musical performances to communicate with the gods (MacMillan, 2000; Irama & Weintraub, 2011).

Rituals construct a realm of communion between humans and gods, and the communicative function of Teochew opera needs to be interpreted from a twofold perspective. On the one hand, Teochew opera is dedicated to the gods as an offering—a manifestation of etiquette—to bring mortals and gods closer together so that the gods can perceive their pious devotion to the maximum extent possible. Individuals offered what they considered to be the finest musical performances to the gods in exchange for the fulfilment of their wishes. The presentation of Teochew opera transforms people from the unequal unilateral solicitation from the gods to the reciprocal exchange of benefits, in which case, at least in the Malaysian Chinese conception, well-prepared Teochew opera performances can reduce the “alienation” between human beings and the gods, which can establish a more smooth and effective communication.

Meanwhile, from the perspective of the Malaysian Chinese, the presentation of secular wishes—exorcism, promotion, wealth, pregnancy—in the form of dynamic performances is more accessible and receivable by the gods. The distance between the transcendental and mundane thresholds is bridged by the medium of Teochew opera, and human beings communicate more closely with the gods as shown in Figure 1. In addition, through music and performance, the gods more directly perceive realistic aspirations, increasing the probability of their fulfilment.

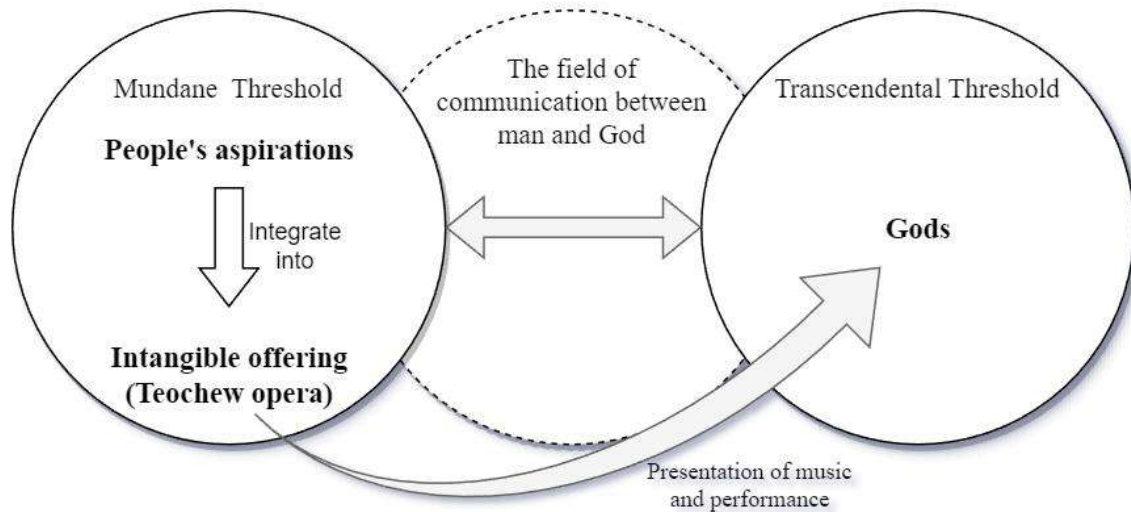


Figure 1 Teochew opera bridges the distance between the transcendental and mundane thresholds.

On the other hand, communication requires presence, which implies that the god—at least in human perception—has to be precisely “existent” (Maddrell, 2013). Although the god statue in the ritual represents a medium that transforms absence into a pictorial presence, this presence remains insufficiently tangible for the participants. As a result, the Malaysian Chinese chose to use Teochew opera to embody the presence of the deity, which is something possessing a body. Performers of Teochew opera symbolically invoke the gods (or are possessed) to bless the masses by acting as the gods. In this ritual process, the image of the god undergoes a transformation from absence to presence as shown in Figure 2. More precisely, through the Teochew opera performances during the rituals, the gods are activated, and a sacred dimension of human-god communication is created through the function of Teochew opera.

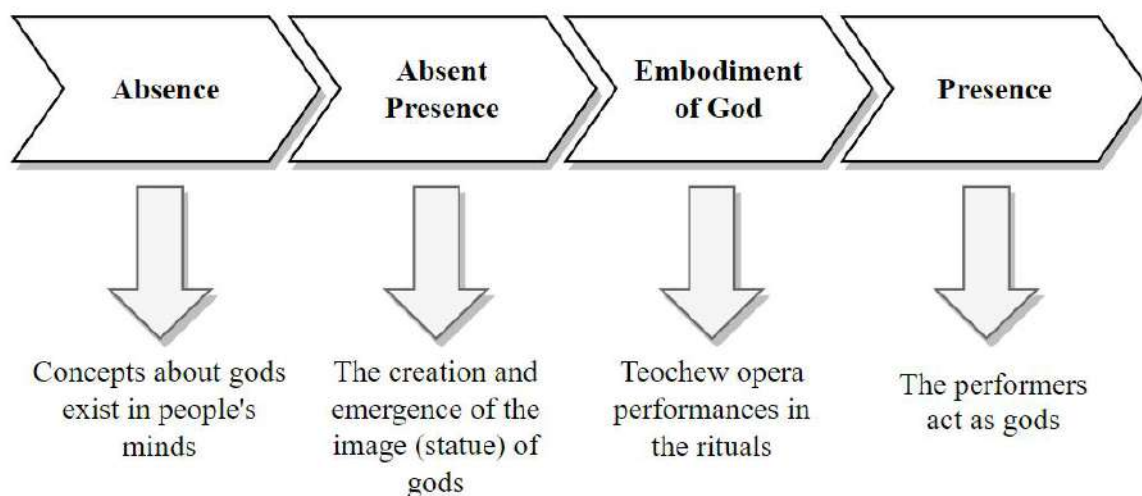


Figure 2. God is embodied through Teochew opera performances.

Retrospective Review of Collective Memory

French sociologist Halbwachs (2020) proposed the concept of collective memory, which he considered to be a collective selection and forgetting of memories by a group of individuals, essentially a social behaviour of reconstructing the past based on the present. In the conception of Halbwachs, the memory of oneself is formed and solidified in communication and contact with others. He emphasised the dependence of memory on society. He stated that collective memory is a framework in which individual thoughts exist and are integrated into those memories that can be evoked. Isolation from the group leads to forgetfulness; human memory is collective, and memories rely on evocating others, even if they are of things that people experience alone.

Despite the abstraction of thoughts, the process of recollection is concrete, and only when thoughts become concrete and perceptible can they enter the memory and become the objects of memory, with concepts and images becoming one in the process. It is essential for truth to acquire a concrete form, either in the form of a specific person, a certain event or a particular place, if it is to be retained in the group's memory (Assmann, 2015). In turn, if an event is to remain in the memory of the group, it must be enriched by the richness of an important truth, and each character and historical fact is transformed into a truth, a concept, or a symbol when it enters this memory. As a result, memory acquires significance and becomes part of the social system of thought.

Teochew opera in Malaysia is precisely a cultural form of the collective memory of the Chinese. In the past, living experience bearers and communicators passed on cultural memory, and it was a short-term social memory which was prone to fracture or blurring in the transmission process. However, when memory is retained in a cultural form, realised utilising symbolic objects, it can span thousands of years because the bearers of this memory are songs, dances, symbols, and words (Assmann, 2015). Fearful of forgetting their traditions, the Chinese have combined religious beliefs, customs, and morals with song and dance performances to form an actual, collective memory of Teochew opera (as shown in Figure 3), an aggregation of Chinese culture.

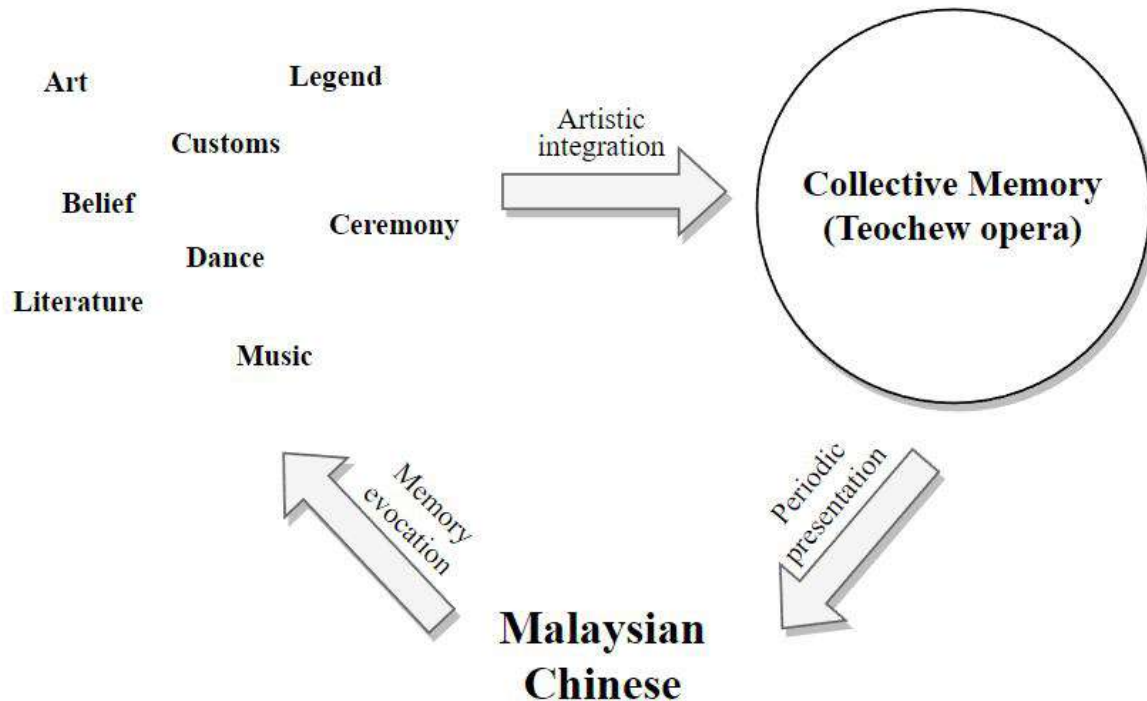


Figure 3. Teochew opera as a collective memory of the Malaysian Chinese.

Meanwhile, the image of recollection requires a specific space to be materialised and a specific time to be present; hence, the image of recollection is always concrete in both spatial and temporal dimensions. On the one hand, memories are invariably centred around original or significant events; on the other hand, memories possess a cyclical rhythm. For example, Teochew opera performances in Malaysia are connected closely to the Chinese deity's birthday festival and are staged in improvised "temple theatres". The Chinese settled as a group in Malaysia. They tried to find ways to create some of these sites for themselves—sites that provide memories—and to preserve them as these sites provide not only places for various communications among group members but also symbols of their identity and recognition and clues to their memories, which require locations and tend to be spatialised (Assmann, 2015).

Teochew opera performances in Malaysia are a review of the collective memory of the Chinese, and the time, occasion, sound, movement and plot evoke retrospective contemplation. It is multifaceted, of which the most obvious manifestation is in folklore. Folklore is the totality of oral traditions shared by particular communities, which includes stories, myths, legends, poems and other oral traditions, but also material culture, the actions of folk beliefs, and the forms and rituals associated with celebrations (Ben-Amos, 1971). Chinese folklore is embodied in traditional festivals, which share a common feature of using visual forms through a series of formally programmed contents and rituals to repeatedly arouse the excitement of people's visual nerves, impact their emotional dams, and demonstrate the cultural connotations accumulated in the deeper layers of the consciousness of the ethnic group.

Teochew opera in Malaysia is precisely such a form of visual and auditory fusion, which adequately demonstrates Chinese folklore and evokes the deep cultural memories of the Chinese

through periodic performances. Through the festivals, the opera activities enabled Malaysian Chinese to have a more precise and more explicit understanding of the sequence of Chinese deities and traditional customs; through the music, they were reminded that apart from Western musical elements, there is also a familiar and unique mode of scales and instrument configurations; and through the performances, the symbols of movement, dress and language were sequentially presented to correspond to the schemas in the Malaysian Chinese conceptual world, thus reinforcing the symbolism of various types of symbols for the Chinese. In Teochew opera performances, the cultural memories of the Chinese are evoked, and a solid cultural boundary is constructed within the community to resist the force of assimilation of other cultures in the multicultural context.

Entertainment and Edification

In Malaysian society, Teochew opera is an entertainment alternative for the Chinese to relieve the bitterness of their lives, to get rid of spiritual dilemmas such as indifference, accidents, and fatigue, to gain happiness, and to reinvent themselves. Meanwhile, Teochew opera also integrates traditional Chinese moral education with entertainment, a form of edification that is both educational and entertaining as shown in Figure 4.

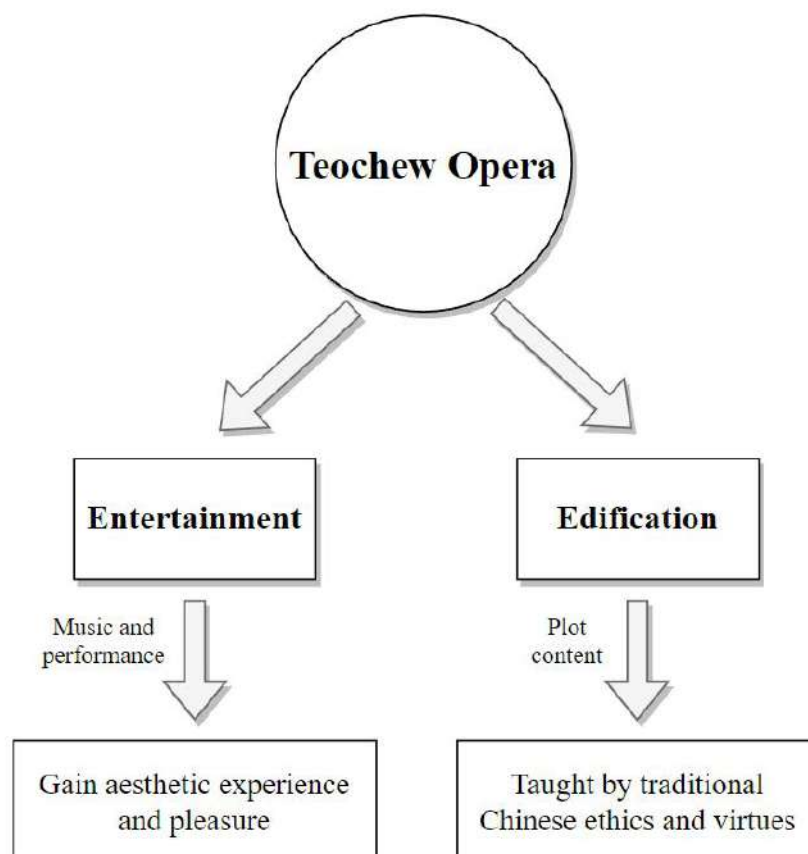


Figure 4. Entertainment and edification in Teochew opera.

In terms of entertainment, with its virtuality and advocacy, Teochew opera enables the Chinese to release the emotions they cannot, dare not, or are inconvenient to vent to in reality with the help of participating in or watching Teochew opera. In this manner, they gain psychological freedom and

inner strength to control themselves and find consolation for their frustrations in entertainment, although this consolation may not always be adequate. It is the unique function of Teochew opera and why Chinese people appreciate it. Teochew opera has long played the function of bringing pleasure to people and is an essential part of the Chinese entertainment culture. According to Shi (2002), opera, as a public aesthetic entertainment, tends to enable people to enjoy it by immersing their whole physical and mental being.

Wang (2006) stated that opera has the function of entertaining oneself and others and that it can bring pleasure to creators, performers and audiences. Stimulated by the demand for public entertainment, the creators rely on the art form of Teochew opera to express their feelings, get rid of the limitations of time and space in their imaginations, and put their inner feelings and emotions into words and music to obtain the experience of “self-entertainment”. Their operatic productions reflect the playwright’s indictment and criticism of society or human character, pour out the playwright’s pity and sympathy for the underclass, and vent the playwright’s inner depression and resentment.

Meanwhile, the performers adopt Teochew opera as a medium to satisfy the public’s entertainment desire through artistic means and forms. Teochew opera performance is a playful behaviour. Through dressing up, the performers shape stereoscopic characters with their artistic attainments and accomplish the function of entertaining others through heart-warming stories and melodic singing. Performers emphasise their strengths in response to the audience’s different entertainment preferences, either by focusing on their singing skills or by enhancing their movement performance to achieve the entertainment purpose of the audience’s visual and auditory enjoyment. In Teochew opera performances, performers present comical actions and lines to amuse the audience and bring aesthetic pleasure to those present. The Chinese pursuit of entertainment in opera expresses an optimistic attitude towards life and a spiritual orientation towards a pleasant and healthful life.

In addition, regarding indoctrination, Teochew opera contains the Chinese nation’s excellent ideological and moral traditions. With the help of artistic, singing and dancing forms of entertainment expression, it invariably raises the moral realm of Malaysian Chinese and leads to the construction of value systems. Art is supposed to provide beneficial inspiration, but instead of being rigidly didactic, it ought to be revealed naturally from sharp, vivid images (Wang, 2008). Teochew opera is a cultural crystallisation of the Chinese mind, which contains the personal thoughts and feelings of the playwrights and the ethics and morals commonly shared by the Malaysian Chinese. These ethics and morals, however, subconsciously influence people’s thoughts and behaviours. They serve a significant function in edifying individuals and maintaining the harmony and stability of Chinese communities. Teochew operas performed in Malaysian society can be classified into historical, family, trial, and romantic repertoire based on the contents involved, and the functions are shown in the Table 3.

Types	Contents	Edification Function
Historical Repertoire	The theme of historical events or figures, often through the implicit praise and criticism of	1. Cultivate correct moral values, good and evil; 2. Cultivate the national spirit of

	the narrative functions to pass on the moral concept. It also evaluates historical events and figures by praising the good and depreciating the bad.	patriotism (ethnic affinity); 3. Cultivate the virtues of “truth, goodness and beauty (真善美)”.
Family Repertoire	It is based on the theme of marriage and family relations and expresses the moral and ethical concepts of the family.	1. Cultivate the traditional ethics of the father’s kindness and the son’s filial piety (父慈子孝); 2. Cultivate the traditional ethics of loyalty of husbands and virtuousness of wives (夫义妻贤); 3. Cultivate the traditional ethics of brotherly harmony (兄友弟恭).
Trial Repertoire	It depicts the story of officials vindicating wrongful convictions and doing justice to the people. To a certain extent, the trial plays are metaphors for social problems, reflecting the desire of people living in the lower strata of society for a fair and just society.	1. Emphasise the social ethos of punishing evil and promoting good; 2. Emphasis on the moral quality of honesty and fairness of those who serve as officials.
Romantic Repertoire	Love between men and women is the main content. Such plays mostly reflect the discrimination against women and the deprivation of their basic human rights in feudal society. The moral concept of freedom of marriage and love is expressed.	1. The inculcation of the concept of freedom in love; 2. The inculcation of the morality of fidelity in love.

Table 3. The edifying function of different types of Teochew opera repertoire.

The edification function of Teochew opera in Malaysian society is embodied in persuading people to be virtuous and punishing the vicious. Virtuous in this context refers to all kinds of Chinese moral excellence and norms, including filial piety, respect for brothers, loyalty, trustworthiness, propriety, righteousness, incorruptibility, and shame, and behaviour that violates these norms is called vicious. In the early period, when immigrants to Malaysia could not acquire opportunities for quality education, watching Teochew opera became the primary way the Chinese acquired knowledge of history and society. In the present day, Teochew opera is a manner of edifying the younger generation. Through performances, the younger generation of Chinese are

educated about excellent Chinese morals, historical stories and traditional customs. Through the opera, the Chinese gain cultural sustenance and find spiritual satisfaction. Loyalty and treachery, beauty and ugliness, kindness and wickedness in reality are instantly simplified and vividly illustrated on the stage. Teochew opera adopts the ending of the story that no-good deed goes unpunished and no evil deed goes unpunished and portrays well-defined excellent and evil characters to inspire Malaysian Chinese to develop a belief in goodness and to teach them how-to do-good deeds by following the example of the characters in the opera.

In general, the role of edification in Teochew opera is manifested in both the individual audience and the society as a whole. Teochew opera is traditionally based on the tenet of enjoin good and forbid evil, with loyalty, filial piety, and righteousness as the standards of good and evil. By promoting the moral ethics of good and evil, let the individual be good, from each good individual to form a good whole to make the society harmonious, stable and orderly positive development.

Construction of Identity

The Teochew opera is a multifaceted construction of identity. On the one hand, in the process of participating in Teochew opera performances, the Malaysian government's recognition and respect of Chinese culture is progressively sensed by the Chinese, and they are gradually reinforcing the construction of their national identity; the Teochew opera on the other hand, is a visible manifestation of Malaysian Chinese ethnic identity and a cultural symbol that distinguishes the self from the other in a pluralistic community. In a country dominated by Malay culture, Chinese culture has long been on the periphery of mainstream culture in the past and confronting the twin dilemmas of exclusion and assimilation. However, in present-day Malaysian society, the fact that the Chinese have the opportunity to organise and participate in cultural activities of Teochew opera performances, especially those organised by the official government, undoubtedly indicates the recognition and acceptance of Chinese culture by other ethnic groups, which is indeed at least valid to a certain extent. This inclusionary cultural policy has contributed to strengthening the national identity of Malaysian Chinese, which is essentially a political identity of Malaysia (Wang, 2001).

In retrospect, although most Chinese immigrants joined Malaysian citizenship after Malaysia's independence (1957), the Chinese's national identity with Malaysia was not as firm and intense as they thought it would be. The interviews conducted for this study revealed that the Chinese in Malaysia had political identity problems mainly stemming from their frustration with their incomplete citizenship in the context of indigenism. The policies formulated by those in power in the past Malaysian government, such as the Unitary Culture, the New Economic Policy (1970) and the Quota System (1971), have severely restricted the rights of non-indigenous citizens, including the Chinese, in terms of their right to education, political participation and even in terms of employment and livelihood. These past policies have pushed the Chinese and other non-indigenous communities to the status of "second-class citizens", which has undoubtedly affected the Chinese's sense of belonging and national identity in Malaysia.

Focusing on Malaysian society at present, although the government has not granted the same "privileges" to the Chinese as to the Malays, the restrictions that hinder the development of the Chinese community are gradually decreasing. In Malaysian society, Chinese folklore festivals are officially recognised, and the Chinese can present Teochew opera in their festivals. Simultaneously,

the Malaysian government promotes Chinese culture, including Teochew opera, in official cultural events. While participating in Teochew opera performance activities, Chinese people sense the respect and recognition of Malaysian officials for their ethnic cultures and the government's practice of multiculturalism. The complaints and dissatisfaction of the Chinese with Malaysian policies have subsequently diminished, and their identification with the nation has intensified.

Furthermore, Chinese dialect groups participate in and experience Teochew opera culture together, proving that they belong to the same group and constructing and strengthening their cultural identity. According to Zhang (2007), cultural identity is recognising a common culture among people or between individuals and groups. It is based on sharing the same cultural symbols, the following common cultural concepts, and adherence to standard modes of thinking and norms of behaviour. The cultural identity of Malaysian Chinese is primarily manifested in the recognition of the same cultural background, cultural atmosphere and cultural behaviours. People from different communities sharing identical cultural backgrounds come together to participate in Teochew opera as a cultural behaviour in the cultural atmosphere of folk festivals, which is a way of constructing cultural identity. In Malaysia's multicultural context, Teochew opera performances by the Chinese are a recognition of Chinese culture and a reflection of the identification and acceptance of other cultures. For instance, the Chinese are willing to participate in Teochew opera performances during Na Tok Kong worship rituals or gladly accept Teochew opera scripts adapted from Malaysian or Indian legends and stories.

Cultural identity is the pursuit of self-identity. In the context of multiculturalism in Malaysia, the Chinese, on the one hand, need to establish the general impression of the community by confirming the legitimacy and acceptability of their self-identity. On the other hand, it is also essential to distinguish the self from the other and to demarcate the cultural boundaries between different races by setting limits on the self. In performing Teochew opera, the constant emphasis and reproduction of traditional Chinese cultural symbols with shared memory serves as a way of identity for the Chinese community. After the Chinese community recognises these symbols, they, in turn, evolve to become an integral part of the Chinese identity.

The performance of Teochew opera is a group activity that transcends clans, families, and the neighbourhoods in which the Chinese live, creating occasions for communication and interaction among the various dialect groups of the Chinese. On the one hand, during their activities, the Chinese broke through the limitations of their daily lives, and Chinese from different states, neighbourhoods, and clans came together in a manner that broke the original pattern of population distribution dominated by dialect clusters. In this way, the collective power is brought into play, the unity of the Malaysian Chinese is ensured, and the strength of the Chinese community in Malaysian society is manifested, which is the direction that the Chinese community has been striving for a long time. Teochew opera performances, on a spiritual dimension, can play a role in promoting communication and enhancing the relationships among members of the community.

On the other hand, the performance activities of Teochew opera are also an occasion to review the kinship structure of the Chinese family or clan. The Chinese have permanently attached importance to titles. However, due to human and geographical isolation, the Chinese in Malaysia have traditionally been quite ambiguous about the titles of different generations and kinships, coupled with the long-standing use of English to refer to kinship, for example, Shu (叔, an elder younger than the father) and Bo (伯, an elder older than the father) are both called uncles in English,

has led to a blurring of the hierarchy in the family. During the exhibition of Teochew opera, in which characters of different generations and statuses of the Chinese community interacted, the Chinese also reviewed the family hierarchy. The interaction clarifies the usual Chinese names for different identities, including the intricate system of honorifics and nicknames, which also illuminates the intertwined web of various identities and grasps the social relationships among the members, which is undoubtedly highly beneficial in strengthening the community's affinity.

Additionally, language is the most essential tool for communication among members of a society, and the centralised use of the Chinese language is an effective way to promote ethnic cohesion. Teochew opera was usually presented in the theatre space in dialect, and the Chinese used the Chinese language system to express their ideas, wishes and demands to each other, which, together with the mutual visits during festivals and the generous invitations that often accompanied the performances, further materialised the exchange of feelings among the Chinese. With a common language expression, coupled with other means of expression and support, such as opera performances, communication among members of the Chinese ethnic group will be smoother, and the conscious identification and reinforcement of the membership will be accomplished quickly. This identification with traditional culture maintains and fosters a sense of belonging among the Chinese, and the community cohesion is thus consolidated and reinforced.

Conclusion

The function and significance of music lie not in the composition itself but in the musical activity, that is, what people do in musicking (Small, 1998). We can only appreciate the essence of music by understanding what people do when they engage in musical activities. Overall, the fact that Teochew opera has been able to sustain itself under the pressure of multiculturalism in Malaysia is inextricably associated with its social function and significance.

Through this study, the primary function of Teochew opera in both sacred and secular contexts in Malaysian society is symbolic representation. Through Teochew opera, a perceptible form, the deeper meaning is conveyed in a manner accessible to humans. Teochew opera performances construct meaningful performance situations through visual and auditory symbols, from which the participants revisit and experience these meanings and derive spiritual solace. Besides, Teochew opera is regarded as the best offering to the gods in Chinese rituals, a manifestation of Chinese sincerity and a means of enhancing the effectiveness of the rituals. Through this combination of song and dance, the gap between the earthly and divine realms is temporarily dissolved under the effect of the rituals, and the gods more effectively accommodate the utilitarian aspirations of the Chinese.

Meanwhile, the fact that Teochew opera can be presented in Malaysian society represents official recognition and respect for Chinese culture, which implies that the cultural rights of Malaysian Chinese have been realised to a certain extent. The Chinese periodically review the collective memories—traditions and folklore, beliefs and worship, the aesthetics of music and dance—in their deeper consciousness through regular performances of Teochew opera in Malaysian society. In the multicultural context of Malaysia, the Chinese have a clear sense of “who I am” through their participation in Teochew opera activities. Teochew opera constantly reminds Malaysian Chinese of their identity, preventing them from losing themselves and building a solid identity structure. It

resists the forces of cultural assimilation from other ethnic groups and maintains the individuality of Chinese culture.

Teochew opera is also a recreational and indoctrination tool for the Malaysian Chinese. The Chinese are immersed in the songs of Teochew opera performers, enjoying the charm of traditional Chinese music, experiencing the plot interpreted by the actors, and marvelling at the profundity of Chinese culture. While fulfilling aesthetic needs, Teochew opera is also a means of indoctrination. Through storytelling, it inculcates traditional virtues and morals in Malaysian Chinese. By using artistic means, it demonstrates the ethos of the Chinese ethnic group within the Chinese community and even to other ethnic groups in Malaysia.

Hence, it is possible to understand why Teochew opera can be sustained in Malaysia. For the Chinese, Teochew opera is irreplaceable owing to its benefits to the Chinese community – identity, power, status, and entertainment.

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I would like to extend my appreciation to the members of my research committee, for their time, critical feedback, and suggestions, which helped refine this work. I would also like to thank my interviewee Ling Goh and her Teochew opera troupe for providing a substantial amount of material for the research. Thank you all for your support. This thesis is a reflection of your contributions.

Conflict of Interest

The authors declare no conflict of interest.

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A Critical Exploration of American Culture Values in The Great Gatsby: A Tri-Dimensional Analysis and the Trajectory of Value Distortion

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Abstract

This thesis is an attempt to assess and apply the current research trends of the American culture values in *The Great Gatsby*. The rapid development of American capitalism in the Jazz age made the United States enter the modern society of industrialization. However, American people pursue the achievement of social value that has been abandoned, deviating from the original intention of the American dream early beliefs. It elaborately analyzes the literature called *The Great Gatsby* which embodies the profound study of American cultural values, aiming to further comprehend that the values play an essential role in people's understanding and transformation of the world. This thesis analyzes the American culture values embodied by *The Great Gatsby* from three dimensions including individualistic value, material culture and social stratum culture, visually presenting the different levels of the positive and negative aspects of the mainstream American culture. It also objectively reappears the fact that the transition between old and new American culture values in the money-oriented society of the 1920s, showing the inevitability of the distortion of the American culture values.



Full Text Article



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Keywords: American Culture Values; The Great Gatsby; Jazz Age; American Dream; Enlightenment

Introduction

The publication of *The Great Gatsby* established F. Scott Fitzgerald's position in the history of modern American literature, becoming the spokesman of the jazz Age in the 1920s and one of the representative writers of the Lost generation. The rapid development of American capitalism in the Jazz age made the United States enter the modern society of industrialization. This significant period that represented the formalization of American mainstream cultural pattern when the transition between old and new American culture values in the jazz Age.

Many scholars both at home and abroad analyze in *The Great Gatsby* which embodies the profound study of American cultural values, pointing out that the individual unlimited expansion of desires under the influence of consumer culture. They state that American people pursue the

achievement of social value has been abandoned, deviating from the original intention of the American dream early beliefs. Eventually, it leads to the distortion of personal values, thus revealing the tragedy of Gatsby and the inevitability of the subsequent disillusionment of the American dream.

The jazz Age in the 1920s in the United states experienced rapid economic development and transformation from an industrial society to a consumer society, and people's accumulated material wealth had highlighted the lack of spiritually barren. This paper discusses American cultural values in *The Great Gatsby* at the core of the kernel, aiming to further comprehend that the values play an essential role in people's understanding and transformation of the world. What is far more important is that values affect people's understanding and evaluation of matters, searching for values is to find the true meaning of life. Through the elaborate study of American values, it will find out the underlying factors that influence and shape American culture values, and obtain enlightenment from individualistic value, material culture, and social stratum culture.

This thesis consists of six chapters. Chapter one introduces the analysis of American culture values in *The Great Gatsby*. Chapter two deals with reflections of different American Culture Values in *The Great Gatsby*, including individualistic value, material culture, social stratum culture. Chapter three discusses that reasons for the conversion of American culture values in *The Great Gatsby*, including political influence, economic development, social background. Chapter four analyzes that the study on the enlightenment of cultural values embodied by *The Great Gatsby* to China. Chapter five introduces the conclusion of the thesis.

Reflections of Different American Culture Values in The Great Gatsby

It introduces that the analysis of Gatsby's different culture values from different perspectives, including the perspectives of individualistic values, material culture and social stratum culture. Firstly, the American value of individualism encouraged people to constantly explore and improve themselves so as to realize social values. Secondly, under the influence of material and cultural pessimism, people are selfish and vain and have no moral values. Thirdly, in the environment where money worship and hedonism are prevalent, class solidification is getting more and more serious.

Individualistic Value

Individualism is the core of American culture and has always influenced the thoughts and behaviors of Americans. The American values of individualism in the 1920s were clearly reflected in *The Great Gatsby*. According to the essence of values, one is the development of Gatsby, the hero, who holds an optimistic attitude and individualistic values. The other is Daisy, the heroine, who embodies the extreme individualistic values of the bourgeoisie.

Gatsby, the hero of the Great Gatsby, was a typical embodiment of American individualism. His optimism, diligence and enterprising were the necessary prerequisites for realizing the American dream. In despite of Gatsby came from the lowest strata of society, he was eager to realize the American dream and hope to change his fate by his own efforts when he was very young(Liu XiaoFang, 2024). Franklin realized the American dream through his own efforts, so Gatsby took

him as his goal and motivation. According to Franklin's time plan, Franklin arranged a precise and reasonable timetable for himself and executed it rigorously. For instance, “No more smoking or chewing”, “Bath every other day”, “Read one improving book or magazine per week” etc. He firmly believed that he can rely on his own efforts, starting from scratch, living a wealthy and happy life and realizing the value of life. He is a person with the spirit of self-reliance. He not only gets rid of the shackles of other people's thoughts, but also can use his own potential to realize his own wishes. Compared with the property Tom inherited from the previous generation, Gatsby came from lower class. However, he was not willing to be mediocre and had great ambitions for his future development. Although he was cheated by Cody's mate for his reward, he did not hate her, nor was he depressed, and his dreams had not been destroyed. He looked for opportunities and obtained Wolf Sam's trust within three years. Gatsby's ability is amazing, but his talent is not only limited to accumulating wealth, but also includes other aspects. More importantly, Gatsby, relying on his own efforts, was never willing to live a life of mediocrity. He held the belief that one's dream could be realized ultimately as long as one strived to realize their dreams and personal values. These above convey a conviction that Gatsby possessed the indomitable spirit of individualism which was admirable and respectable.

The values of extreme individualism embodied in Daisy were quite different from the positive values of the protagonist Gatsby, and the inherent characteristics of the bourgeoisie were fully reflected in this heroine. A society that values money will not cultivate gentle women. In the corruption of materialism and money worship, the souls of women like Daisy were etched with pits and blemishes by the times. However, this hedonistic lifestyle had already robbed them of their own identities, and they were led step by step into the abyss by false guidance, without realizing that it was wrong, and they thought that this was exactly the kind of happiness they wanted (Liu Dongyang, 2014). Daisy was the symbol of beauty and wealth, and she was also the embodiment of Gatsby's dream. However, at the same time she was selfish and indifferent towards lower class, and she had no sense of responsibility but just took the belief of material supremacy as her pursuit. It was precisely this feature that, in face of money and benefits, she abandoned Gatsby who treated her with sincerity and married Tom without hesitation who was rich and had high social position, thus obtaining a stable life brought by money and wealth. Faced with morality and humanity, she blamed Gatsby for killing Tom's mistress. The despicable means led Gatsby to be shot by Wilson, who was deceived, and paid the price of life. As long as Daisy's own desires could be satisfied and her own crimes could be escaped, she could even sell her own lover and close friends. She didn't care about the loss of others' interests and whether she was condemned by conscience or not.

The extreme individualism embodied in Daisy reflects the inner conformity of the American people in the Jazz Age from the pursuit of pleasure to decadence in life values. "The Great Gatsby" intuitively presents the positive and negative aspects of American cultural values. It objectively reproduces the fact that the United States has changed from old values to new values, and shows the American social scene in the 1920s.

Material Culture

The rapid development of economy made the consumption-oriented material culture permeate the whole American society. After the First World War, the economy of the United States entered the

track of rapid development, consumers were free to choose and buy goods according to their own needs. The rich material life, such as the dazzling array of goods, drunken life, and the pursuit of money and fame and wealth, shows the cultural transformation era of the United States from old values to new values. The traditional ethical values had been unprecedentedly challenged by the psychological consumption with material culture as the core. It highlights the value orientation of the American people under the influence of material culture and consumer culture, and people's psychological state of emptiness and helplessness under the control of material desires.

The Great Gatsby described a series of symbolic objects in Daisy's home, such as car, piano, cigarette, gift, etc. What's more, it demonstrated the magnificent decoration style and the fashionable interior design of the house. In fact, the space occupied by various consumer goods in Daisy's home was a metonymy for American social prosperity and economic abundance (Chen Xu, 2020). In the 1920s, under the influence of material culture, Daisy was completely different from the stereotyped traditional women. Daisy placed her ideal life on material benefits and showed a certain tendency of objectification under the foil of material. She was not only going to smoke and drink at wine parties, but also wearing heavy make up to go to all kinds of noisy parties. However, material affluence was difficult to fill the spiritual vacancy. Daisy can only cover up her inner emptiness and confusion by playing a noble and elegant member of the upper class and enjoying life in boredom. In the ostentatious environment, Daisy indulged in the pleasure of wealth and then transformed into a typical representative of materialism. She put aside and neglected Gatsby, who was full of enthusiasm but was lack of wealth. Under the temptation of material, she mercilessly abandoned Gatsby who loved her deeply. Tom had the tangible material wealth that Daisy craved, but Gatsby could not give her the sense of security she needed desperately.

In order to win Daisy's heart, the protagonist of the novel *Gatsby* spared no efforts to obtain the social identity and status. His lover Daisy was obsessed with wealth. In order to amass wealth, Gatsby was willing to collude with the underworld for smuggling, including tax evasion and mercenary. These illegal act led Gatsby who had been frugal and steadfast, going astray and losing his righteous bearings. The phenomenon reflected that people's values were alienated and distorted and the ugly human nature was exposed completely under the drive of material culture. The materialization of value was the inevitable production of the capital society and the erosion of the human value. At the same time, the intensification of value materialization made people's daily life become unprecedented utilitarianism, which became the main standard for evaluating and measuring people and things. Gatsby bought luxurious villas, yachts and famous cars to show his improvement of status. Meanwhile, in order to maintain his reputation, he kept inviting celebrities to hold parties in his luxurious villa. With material enjoyment and luxurious consumption, Gatsby became famous and his social status was greatly improved. According to the novel, "It has two small powerboats, a Rolls Royce that shuttles around town from 9 a.m. to midnight, and a station wagon that looks like a yellow beetle that shuttles guests to the train station." All these undoubtedly reflected the naked relationship of interests between people in the material society. At this moment, Gatsby was well-off and affectionate. When Daisy saw that Gatsby became a millionaire and held a luxurious party that could be attended by all members of the upper class, she might regret her original choice in front of material wealth. As mentioned in the novel, Daisy burst into tears in the pile of colorful shirts symbolizing wealth. However, what aroused Daisy's old love was not Gatsby's infatuated and sincere heart, but the luxurious decoration in the villa and Gatsby's luxurious life.

There is no doubt that Daisy's material desire and shallowness were obvious. The social atmosphere of money worship not only made people decadent in spirit and morality, but also made countless people gradually degenerate under the era of rampant material culture.

Social Stratum Culture

The Great Gatsby described the tumultuous age of 1920s after the end of World War I in the United States. In the prevailing environment of money worship and hedonism, the phenomenon of stratum solidification was becoming more and more serious. The dreams and endings of the characters from three different classes in the literature elucidated and confirmed the phenomenon of the solidified social stratum and hierarchy in the United States, which only emphasized material abundance and ignored spiritual pursuit. Under the imprisonment of social stratum solidification, the American people deviated from the original belief of the American dream and lost the values of equality, freedom and democracy advocated in the previous time. Early Americans believed opportunities were equal that everyone had possibility to achieve their dreams through their efforts. However, with the development of American society, the social stratification was gradually distinct, and it became more and more difficult for people from the bottom of the society to realize the dream of leaping the stratum, and it was also difficult for them to have the opportunity to realize the transformation of identity.

Material culture researchers argue that objects can "perform social functions", "integrate and differentiate different social groups, social classes or tribes" (Woodward, 2007). In a consumerist society, residential and other consumption items are re-coded as indices of social class. In *The Great Gatsby*, the upper class, the emerging class and the poor class were respectively represented by the places where three different characters live: East Egg, West Egg and Grey Valley. Tom Buchanan, the representative of the upper class living in East Egg, tried his best to protect the existing social status and was wary of other classes. He was especially afraid that the emerging class like Gatsby would threaten his status. The upper class represented by Tom distinguished themselves from other classes by means of good educational background and noble blood, so as to maintain his own noble social status. What's more, Daisy was also from the upper class. In the literature, she was called a beautiful little fool and a gold digger whose voice was full of money. She was constantly making choices in front of material wealth. In the later development of the story, Daisy and Tom used despicable means to put the blame on Gatsby after the hit-and-run. Not even a single member of the upper class attended Gatsby's funeral, and those stubborn old aristocrats just regarded Gatsby's home as a free entertainment place. Their innate sense of superiority revolted them and made them loathe anyone who might threaten their social status. As Nick said, they smash things, destroy people, and then put money into their pockets to let others clean up their mess (Fitzgerald, 2016).

As a representative of the emerging class, Gatsby had no noble blood, and the lack of strong family background had actually determined his social status. Without the support of both economic and cultural capital, Gatsby obviously could not reach the social prestige of Nick and Tom's family. Due to the impact of Franklin's early spirit, Gatsby determined to become a rich man, entering into the upper class and pursuing the heart of the green light, that is, the dream of wealth and love. What it had mentioned about these dreams that the middle and lower classes of American society had

always sought American dream. Owing to the different historical background, American society was full of material desire and solidified class structure in the 1920s. As long as you work hard, you could succeed definitely and everything is possible. This early belief in the American dream had been annihilated, and the alienation and distortion of the values of the American dream and the serious erosion of human nature had already made the American dream become an ethereal existence. Money cannot be the capital tool to break through class boundaries. Gatsby's efforts to accumulate wealth by hook or by crook and his hope to build a ladder leading to the upper class through money were doomed to fail. He thought he had completed the upward class transition, but he did not know that money could not be the "capital" that broke through class boundaries (Chen Jing, 2018). Gatsby's death had a great influence on the American dream and the jazz age, showing the sentiment of the post-war lost generation towards American dream was disillusioned. The upper class obstructed the channels against the middle and lower classes to move to the upper society, and the benefit culture of the whole society hindered class mobility. This model of allocating resources according to their ability had broken the social equity and justice, and social productivity would inevitably decline, which was not conducive to the stable and harmonious development of society.

Wilson and his wife living in Grey Valley represented the poor class. Wilson was a typical representative who had neither economic capital nor cultural capital to support him. The Wilsons' marriage was a hoax. He wore a borrowed suit and married a woman from the same class, but he was unable to remain marital relationship he had sought. Mrs. Wilson Myrtle's situation was quite different from her dream of marrying a rich man. Due to her unwilling to live a poor life with her husband, she held a lot of complaints with Wilson. Mrs. Wilson met Tom from the upper class. She tried to satisfy her desire to cross social strata by pleasing and relying on men, so as to make herself into the upper class. But from the perspective of wealthy people in the high class, she was nothing more than a vehicle for their own personal desires. For example, when Mrs. Wilson was killed by Daisy's car, Tom ruthlessly used his death to cheat Wilson so that he could escape his illegal act. Such kind of people could only be confined to their own social class, breaking away from the label of inferior identity and becoming the plaything of the upper class.

Reasons for the Conversion of American Culture Values in *The Great Gatsby*

The United States is a newly industrial country. At the beginning of establishing its nation, America was the earliest countries to shake off the shackles of centralization of authority and head for the road to democracy. Without a long history or cultural traditions, the United States had developed a diversity of values. Through the presentation of different types of American values, the Great Gatsby reflected the political, economic, social environment factors of the United States in jazz age.

Political Influence

The story took place in 1922, during the post-World War I era (1914-1918) when the United States was experiencing rapid economic growth, and this was also the decade before the Great

Depression (1919-1929), during which jazz was becoming popular among whites, so it was also known as the "Jazz Age"(Wang Xiaoping. 2023).

The First World War resulted in the collapsed capitalist system and people's distorted traditional values and American people need to look for new values to guide their directions. The United States was going through the historical transformation of old and new values. At the same time, the United States made a great fortune by means of providing arms to both sides and became a creditor country from a debtor country when participated in the First World War. Meanwhile, the young generations realized the hollow morality of the early 20th century after participating in the war. People began to doubt what used to be considered sacred. After the end of World War I, this group of young generations reflected on the meaning of the war, beginning to search for cultural values that would reguide their lives—in the pursuit of today's pleasure, actually lost their values and outlook on meaningful life. It reappeared the mental outlook of the American people after the First World War and the confused ideological situation of the "American dream". The traditional cultural values were confronted with various challenges, and the new values had not yet been formed. As a result, Americans were morally corrupted and spiritually barren at that time. They dreamed of becoming millionaires overnight, and the pursuit of material satisfaction had become a social fashion.

In the novel, the author carefully selected characters representing different social classes and then reflected the American social life in the 1920s. Tom and Daisy were representatives of the old aristocracy at the time. They just used money to fill their boring and meaningless lives. They were morally depraved, selfish and irresponsible. As Nick said, they smash things, destroy people, and then put money into their pockets to let others clean up their mess. Gatsby accumulated wealth through a series of illegal crimes. These acts absolutely proved that Gatsby lost his conscience and personal morality in the process of pursuing his American dream. The Wilsons were the lower class of laboring people that led a miserable life. Mrs. Wilson tried to satisfy her desire to cross social strata by pleasing and relying on men, so as to make herself into the upper class. No matter what social class these characters belong to, they are advocating money and pursuing pleasure. Money has become the value orientation of American life. The United States in the Jazz Age was a mercenary and morally bankrupt society. The First World War was an important turning point, especially in the transformation of American cultural values. The material enrichment and spiritual emptiness brought by the war to the American people made the original American dream change secretly.

The traditional social order and norms maintained by Prohibition were in conflict with the modern consciousness held by Americans, which reflected the shaking of traditional values in the period of social transformation in the United States. Prohibition, enacted in 1920, prohibited people from making, transporting, storing, and selling alcoholic beverages in the United States. During the period when the government implemented the ban, the United States changed from an agricultural society to an industrial society, which strengthened the modern consciousness of Americans, broke the moral constraints, and shook and disintegrated the traditional cultural values. The prohibition of alcohol implemented by the institutional power in the United States provided a guarantee for the continuation of traditional morality. Prohibition was a symbol of moral taboos. People at that time broke through the moral taboos represented by prohibition and subverted the existing order and norms. In *The Great Gatsby*, Fitzgerald described the real situation under Prohibition, Tom's small family banquet and Gatsby's grand and noisy cocktail party typically reflected the American youth's

binge drinking during Prohibition. There was a real brass bar in the lobby, stocked with all kinds of gin and spirits, as well as the long-forgotten manna, and then the female guests, who were mostly young, couldn't tell one brand from the other. These scenes were the embodiment of the rebellious psychology of the people aroused by the implementation of Prohibition.

Economic Development

After the First World War, economic growth in the United States was out of control during the Roaring Twenties (Hisa, Min, & Tia, 2021). Material hedonism was rampant, and the traditional values had received unprecedented influence. At the same time, material affluence did not bring spiritual enrichment. People fell into a state of materialistic emptiness, and the spiritual pursuit of human value deviated from the cultural values embodied in the United States. In the case of material abundance, people became more and more utilitarian under the pursuit of money and fame. These qualities were fully reflected in the character descriptions of Daisy and Mrs. Wilson in *The Great Gatsby*. In order to live a luxurious life, Daisy did not hesitate to marry Tom who she did not like at all, just because Tom inherited a huge family property. The description of Daisy's wedding culminated in her utilitarianism, when Tom traveled south with 100 guests in four chartered buses, rented the entire floor of the Mauerbach Hotel, and the day before the wedding, he gave Daisy a string of pearls estimated to be worth \$350,000. Through the wedding of luxury hotels and the value of pearls embodied in the utilitarian behavior, people's psychological desire for material and status reflected the rampant materialism in the Jazz Age, which had impacted traditional cultural values. Mrs. Wilson was ostentatious, and she despised her husband because he had no money. She said that "I married him because I thought he was a gentleman and he had some manners, but he was not fit to lick my shoes". Attracted by Tom's money and social status, Mrs. Wilson became his mistress while being haughty to those around her. When utilitarian existence brought people material satisfaction, it also made people confront the misfortune of spiritual poverty. The values for the purpose of satisfying material consumption and sensory enjoyment were constantly spreading and developing in the society at that time. They may led their different lifestyle, but the values behind them were essentially influenced by the worship of money. The unprecedented material prosperity of the Jazz Age and the increasing prosperity of capitalist society distorted people's traditional cultural values.

The Great Gatsby also demonstrates that people were dehumanized, while things appear to take on animate power. The more people lose their subject position and become objects, the more objects shift into subject position. Hence, social relations are transferred from people to things (Grosu, 2012). In a consumer society, everything in life became a commodity. Consumption was not only reflected in the material aspect, but also in the cultural level. Each consumer was not only the judge of the value of the commodity, but also became the target group judged by the public by virtue of owning the commodity. The purpose of people's consumption was not to meet the basic needs of life, but to get the symbolic meaning represented by the goods. Personal status and wealth were realized by purchasing luxury goods to obtain their symbolic meaning. At that time, consumption became essential behaviors to satisfy their growing desires, which influenced people's values imperceptibly. Mrs. Wilson came from the bottom of society and tried to convey her desire for identity through expensive clothes. She changed clothes three times a day, and the symbolic

meaning of the colors, styles and fabrics of the clothes changed her psychological identity. *The Great Gatsby* mentioned in the novel that after she arrived at the apartment, she changed into the delicate Florentine cream dress, which swelled her and filled the whole room, so that the room seemed smaller. She tried to create social status through luxury goods. The image of Mrs. Wilson reflected the fission of values in the American society under the influence of economic development.

Social Background

Fitzgerald's work *The Great Gatsby* fully embodied the life atmosphere of the American society at that time, and vividly depicted the hustle and bustle, enjoyment and degradation of the 1920s by using vivid and concrete language. It was, in Fitzgerald's own words, an age of miracles, an age of art, an age of excess, and an age of satire.

In *The Great Gatsby*, the descriptions of railways, automobiles, newspapers, telephones and other objects appeared many times in the book, highlighting the rapid development of American technology and economy. The period of time brought an age of the miracles and art. The vigorous rise of the car and other means of transportation in this literature reflected the various situations in social life. Wilson's wife was always carefully selected to be able to show her gorgeous and noble status through the new car. The car was like a mirror reflecting the character's state of mind, exposing her strong vanity and desire to squeeze into society. The description of Daisy's white convertible and Gatsby's Rolls Royce in the work reflected that car became a tool for people to show their wealth and social status at that time. It not only represented the progress of society, but also showed the decline of morality. These products of the new age had provided the convenience of American life, but also the opportunity for human degradation. Material enjoyment would push people's spiritual world to the abyss and lose the right direction. It was also a metaphor for the development of such a capitalist society.

Critics have viewed American society in the twenties as a consumer culture. Other critics explain how the advertisements and media contributed to this consumer culture that influenced American society in 1920s(Beuka, 2011). The prosperity of American economy in the 1920s gave rise to the rapid development of mass media such as newspapers, magazines and movies. The emerging of mass media was closely related to the overall economic situation. According to Brevda, "the great Gatsby portrays the new age of advertising. People check out signs, fashion themselves out of fashionable images, and market themselves as that magical image, becoming signs themselves"(Brevda, 2011).

In order to stimulate sales and increase profits, enterprises began to advertise through newspapers, radio, movies and other effective channels as much as possible. The two most dominant forms of media were radio and film. The former brought news, advertising and jazz music into American families, while the latter became an ingenious way of lifestyle. These cultural forms, which represent the lifestyle of the urban middle class, are sought after by young people. The popular language, fashion style and behavior habits created by the media at that time changed the ideas and lifestyles of Americans, which had a profound impact on American society and culture. The novel described the public image of the characters in particular detail. Daisy and Jordan wore white dresses, Mrs. Wilson changed clothes three times a day, and Gatsby had a pile of high-end shirts of various colors. The characters' understanding of these lives came from mass media such as

magazines and newspapers. The characters in the novel adorned themselves with a lifestyle of higher class, but they were essentially out of the orbit of traditional morality and led hypocritical lives. Their cognition, thinking and behavior habits were carried out according to advertisement and commodity sales, which were based on the absence of any real life. The mass media spawned by the economic prosperity constantly influenced people's ideology.

After the First World War, the United States began a decade of economic prosperity. With the rapid development of capitalism, the traditional puritan convictions of diligence, thrift and simplicity were replaced by the value concept of pursuing material pleasure. This social environment led to spiritual poverty and emptiness and egoism, which gave rise to the people's life habits of profligate, passive decadent, extravagant waste. Under the influence of Prohibition in the 1920s, the American people were banned to drink alcohol, but the phenomenon of public drinking and revelry was common. What's more, under the administration of this policy, unscrupulous merchants became rich by illegally manufacturing or smuggling alcoholic beverages. In spite of possessing the abundance of material wealth, people's spiritual world was gradually barren and empty. They abandoned the traditional value culture, indulging in the material flow of the upper society.

Enlightenment of Cultural Values Embodied by *The Great Gatsby* to China

Fitzgerald's themes range from the fulfillment of the American Dream, to the decadence of the wealthy, to economic inequality, to hero worship. Over the twentieth century, it has emerged to play a central role in how Americans know themselves, and *Gatsby* established or developed many of the tropes that would be dominant in that culture (Batchelor, 2015). The American cultural values embodied by *The Great Gatsby* emphasized the pursuit of material wealth through individual efforts, and people did not care about the harmonious relationships among groups. The communication between people was filled with indifference, selfishness and interests, and the friction and inequality between different classes were completely exposed. The above social problems have important enlightenment and reference value for us to advocate the Chinese dream. Therefore, this part will draw lessons from American cultural values to explain how to build a socialist country with Chinese characteristics.

Firstly, China's prosperity and strength are the result of the joint efforts of all its people. If we just pursue the prosperity of privileged groups, it will lead to the collapse of the Chinese dream. The Chinese dream is put forward from the height of the country, conforms to the wishes and expectations of all Chinese people, and strives to achieve the common happiness of all people. Therefore, the realization of individual dreams cannot be ignored. Only by adhering to the principle of putting people first can the state better handle contradictions among the people and stimulate their creative activities. In this way, we can construct a socialist harmonious society. We need adhere to this target about the realization of the people's all-round development. Common prosperity is not the prosperity of a few people, but the prosperity of all the Chinese people. It is necessary to make common prosperity for all the people in order to strive for the people's happiness. On the new journey of building a modern socialist country in all-round way, there has a far-reaching effect on the fruits of reform and development benefiting all the people in a more equitable way. Thus, this method can make tangible progress in promoting common prosperity for all.

National government should start from the fundamental interests of the masses, effectively protecting the economic, political and cultural rights and interests of the people, constantly improving people's life quality and enhancing their sense of gain, security and happiness.

Secondly, the government should establish an impartial social environment for development so that everyone has an equal opportunity to achieve dream. The novel embodied that most of the wealth of society was concentrated in the upper class. At the same time, this phenomenon made the boundaries between the upper class and other classes more obvious, and the upward mobility of social classes was increasingly solidified. It reflected that upward economic mobility did not mean upward social class, and generational inheritance of social identity still hindered mobility between classes. According to the above phenomenon of stratification, China should adhere to the principle of fairness and justice. Furthermore, national government needs to formulate corresponding policies and regulations to ensure that the basic rights of social members are realized according to law. The fair distribution of social wealth is allocated according to each person's contribution to the society, which can narrow the gap between the rich and the poor and achieve common prosperity. The above measures have benefited the majority of social members and truly improved the quality of social development. Make ensure that every member of society can have roughly the same basic development opportunities and create conditions for the all-round development of personality. This method stimulates people to pursue the dream spirit so as to build a harmonious socialist society. The state should resolutely oppose social privileges to safeguard and realize social fairness and justice.

Thirdly, what China advocates is the simultaneous development of material prosperity and spiritual civilization.. If we only emphasize material affluence while neglecting spiritual civilization, the whole socialist edifice will eventually fall apart. It can be reflected elaborately in the United States described in *The Great Gatsby* is a society of luxury consumption and enjoyment, but behind all the luxury materials, it is a world of spiritual impoverishment and moral decay. These social problems have important enlightenment and reference value for us to make relevant measures. China should build a harmonious society with coordinated economic, political and cultural development. Material civilization is the foundation of spiritual civilization, and spiritual civilization is the leading function of material civilization. Only the joint development of material civilization and spiritual civilization can we promote the sustainable and healthy development of society. Under no circumstances can spiritual civilization be sacrificed in exchange for temporary economic development. While building material civilization, we should give prominent position to the construction of socialist spiritual civilization, steadily advancing the cause of socialism with Chinese characteristics. On the one hand, China should focus on economic development, deepen reform and opening up, promote scientific and technological development, give full play to the strategy of innovation-driven development, and consolidate the goal of making China a strong country. On the other hand, we should pay attention to the construction of spiritual civilization and further strengthen ideological education, vigorously cultivate and carry forward the socialist core value system, and establish correct values so that everyone can become the practitioner and disseminator of socialist core values. Citizens need carry forward the traditional Chinese virtues, understand the true meaning of dedication, solidarity, mutual assistance and friendship, internalize the traditional virtues in the heart and externalize in practice, and create a modern socialist civilized society.

Conclusion

As a noted saying goes “taking history as a mirror”, *The Great Gatsby* describes the American cultural values in the 1920s. Under the influence of materialism and hedonism, the true portrayal of the lost generation is a profound reflection on the aspect of morality. In the rapid development stage of capitalism, people's material affluence and spiritual emptiness form a sharp contrast, deviating from the original faith of the early American dream and distorting the moral value culture. In the face of the trend of materialism and hedonism, the most important is to keep in mind that abolish the characteristic of selfish and vanity without moral values. What is far more important is that everyone need possess the positive attitude to attain goals and dreams, climbing into the ideal society by our own efforts, instead of indulging in the disillusionment of material affluence.

When the chairman Xi Jinping was visiting the exhibition called Road to Revival, he had put forward the Chinese Dream of the great rejuvenation of the Chinese nation, which aimed at national prosperity, national rejuvenation and people's happiness. In this new era, the Chinese dream is not only the dream of the nation but also the dream of every Chinese. History tells us that the future and destiny of each individual are closely linked to the future and destiny of the country. To realize the great rejuvenation of the Chinese nation is a glorious and arduous task, it requires the joint efforts of generations of Chinese people. It cannot achieve this magnificent goal without the unity of the people of all ethnic groups in China.

Through the research of the cultural values of the American society in Jazz Age, we can have a better understanding of American culture values and get the enlightenment conducive to the construction of a socialist country with Chinese characteristics. It is necessary to prevent long-standing problems that happened in the Chinese society. The findings of these problems will provide reference for China to raise one's vigilance and take preventive measures in the future. Through these persistent efforts, it is believed that China will build a harmonious society with coordinated economic, political and cultural development.

Conflict of Interest

The authors declare no conflict of interest.

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An Alternative Interpretation of Australia’s Implied Freedom of Expression— Through the Lens of Intrinsic and Instrumental Values

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Abstract

As a fundamental human right, freedom of expression is constitutionally protected in many jurisdictions with written constitutions due to its critical role in safeguarding individual dignity and self-realization, supporting representative democracy and the rule of law, and fostering diversity and tolerance. Even in authoritarian states where freedom of expression lacks practical protection, constitutions often still declare citizens’ rights to free speech. This study, utilizing a doctrinal legal research approach and a comparative legal analysis, finds that Australia stands as an “outlier” among Western democracies—Australia’s federal constitution and its state and territory constitutions rarely recognize freedom of expression. Through examining this phenomenon through the philosophical lenses of intrinsic and instrumental value, this study suggests that the classification of free expression as merely an implied constitutional right in Australia stems from legislators and judges focusing primarily on its instrumental value, specifically its role in supporting representative democracy, rather than its intrinsic value as a natural right essential to self-fulfillment and individual autonomy. This limited perspective has ultimately contributed to the fragility of protections for freedom of expression within Australia’s legal system.



Full Text Article



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Keywords: Freedom of Expression; Constitutional Rights; Intrinsic and Instrumental Values

Introduction

Written constitutions and bills of rights in democracies always safeguard freedom of expression as one of the fundamental freedoms of individuals or groups from repression or regulation by the state (Barendt, 2005). However, compared to Western democracies such as the United States and

the European Union, freedom of expression is barely recognized in Australian law. This study analyses the reasons for this phenomenon from the perspective of the philosophical rationales of freedom of expression, arguing that, at least at the judicial level, Australia's recognition of the instrumental value of freedom of expression in protecting representative democracy only while ignoring its intrinsic value, led to fragile protections of freedom of expression in Australia. Freedom of expression in Australia is an implied constitutional right compared to other Western democracies with explicit constitutional protections. The High Court of Australia (hereafter HCA) relies on fundamental constitutional concepts such as representative government or representative democracy to support freedom of expression. The "implied constitutional right" has resulted in Australian law not recognizing freedom of expression as a "natural human right" but instead as a tool to ensure the effective functioning of representative democracy. Without representative democracy, freedom of expression has no judicial underpinning in Australia. The neglect of the intrinsic value of freedom of expression has resulted in inadequate legal protections and several coercive restrictions. The frequent renewal of judicial decisions and the conflicting opinions of judges have also led to a high degree of uncertainty as to the scope of the implied freedom of political communication. Thus, the underlying cause of freedom of expression is barely recognized in Australian law, and it is not that the law protects freedom of expression too little or restricts it too much. Instead, inadequate legal protection and coercive restrictions on freedom of expression are symptomatic of the fact that Australian legislators and the HCA, which has the role of judicial interpretation, have focused on the instrumental value of expression as a safeguard for democracy, to the detriment of the speech's intrinsic value. This study first uses doctrinal analysis to review the constitutional protections for freedom of expression in various jurisdictions. It then introduces the philosophical rationales for freedom of expression, dividing them into intrinsic and instrumental dimensions. In addition, this study analyzes how freedom of expression is protected in other democracies from a comparative law perspective and examines the unique approach to protecting freedom of expression under the Australian constitution. Finally, the study highlights the dilemma of inadequate legal protection and excessive coercive restrictions resulting from an Australian model of free speech protection that relies too heavily on the instrumental value of speech.

Literature Review

Fundamental Principles of Freedom of Expression and the Current Status of Positive Law from a Comparative Law Perspective

Freedom of expression is a fundamental prerequisite for exercising other rights, including voting, peaceful assembly, and freedom of association, and it plays a crucial role in safeguarding press freedom (Howie, 2018). Historically, the origins of freedom of expression can be traced back to parliamentary privilege, which protected legislators' expressions in parliamentary debates from prosecution. Over time, the abolition of prior censorship in Britain extended these rights from an elite few to the general public, with the "Letters of Cato" further highlighting the importance of free speech within political processes. Additionally, theories of natural rights, the growth of religious tolerance, and the nature of federalism have also played a foundational role in establishing contemporary freedom of expression (Bogen, 1983). As immunity rules, freedom of expression

includes three distinct dimensions: the specified categories of protection, the degree of protection (absolute or conditional), and the types of protected behaviors (Stevens, 1992).

At the international law level, freedom of expression is enshrined as a fundamental human right in Article 19 of the 1948 *Universal Declaration of Human Rights* (United Nations, 1948). Subsequently, Article 19, Section 2 of the 1966 *International Covenant on Civil and Political Rights* further affirmed the right to freedom of expression (United Nations, 1966). At the regional convention level, Article 13 of the *American Convention on Human Rights* outlines the forms and limitations of freedom of expression and the criteria for censorship and restrictions on such actions (Organization of American States, 1979). Article 10 of the *European Convention on Human Rights* divides the concept of freedom of expression into two dimensions: the freedom to hold opinions and the freedom to receive and impart information and ideas (European Union, 1950). Similarly, Article 9 of the *African Charter on Human and Peoples' Rights* also links the rights to receive, disseminate, and express information when defining freedom of expression (Organization of African Unity, 1981). At the level of specific international conventions, Article 5(d)(viii) of the 1965 *International Convention on the Elimination of All Forms of Racial Discrimination* does not explicitly address freedom of expression; however, it encompasses the "right to freely express opinions" within the context of ensuring equality, opposing discriminatory speech based on race, color, and other factors (United Nations, 1965). Additionally, Article 13 of the 1989 *Convention on the Rights of the Child* establishes children's right to freedom of expression (United Nations, 1989).

(Table 1)

Table 1. Key International Treaties Protecting Freedom of Expression

Year	Title	Type
1948	Universal Declaration of Human Rights	The Charter of the United Nations
1966	International Covenant on Civil and Political Rights	International Convention
1969	American Convention on Human Rights	International Convention
1950	European Convention on Human Rights	International Convention
1965	International Convention on the Elimination of All Forms of Racial Discrimination	International Convention
1989	Convention on the Rights of the Child	International Convention

At the domestic law level, many jurisdictions recognize freedom of expression as a constitutional right. The United States, noted for its robust protection of free expression, explicitly prohibits the legislative deprivation of citizens' rights to free speech and press in the First Amendment to the United States Constitution (United States of America, 1791). Article 5 of the Basic Law for the Federal Republic of Germany guarantees the protection of freedom of expression (Germany, 1949). Section 2(b) of the Canadian Charter of Rights and Freedoms establishes freedom of expression as a fundamental freedom guaranteed to everyone (Canada, 1982). Additionally, the constitutions or constitutional documents of jurisdictions such as Japan (Japan, 1946), India (India, 1949), Brazil (Brazil, 1988), South Africa (South Africa, 1996), France (French, 1958), China (China, 1982), and Russia (Russian, 1993) as well as international organizations like the European Union explicitly provide for the protection of citizens' rights to freedom of expression (Table 2). Although freedom of expression in the UK is regarded as a residual liberty—existing only within the gaps of legal restrictions such as breach of confidence and obscenity—its status has evolved. Influenced by the *European Convention on Human Rights and Fundamental Freedoms* and the *Derbyshire County Council v Times Newspapers Ltd* (1993), freedom of expression can now be viewed as a foundational principle of English law, serving as a criterion that courts must consider when developing common law or interpreting statutes (Barendt, 1993). In contrast, freedom of expression in Australia is not explicitly stated in the Australian Constitution but is regarded as an implied constitutional right. Unlike the United States or Canada, which have a Bill of Rights or Charter of Rights and Freedoms that explicitly outlines this right, the High Court of Australia has affirmed in cases such as *Nationwide News Pty Ltd v Wills* (1992) and *Australian Capital Television Pty Ltd v Commonwealth* (1992) that this right is part of the implied protections within the Constitution.

Table 2. Key Countries and International Organizations with Constitutional or Constitutional document Protecting Freedom of Expression

Year	Title	Jurisdiction
1791	First Amendment to the United States Constitution	The U.S.
1949	Basic Law for the Federal Republic of Germany	Germany
1982	Canadian Charter of Rights and Freedoms	Canada
1946	The Constitution of Japan	Japan
1949	The Constitution of India	India
1988	Constitution of the Federative Republic of Brazil	Brazil

Table 2. Key Countries and International Organizations with Constitutional or Constitutional document Protecting Freedom of Expression

1996	The Constitution of the South Africa Republic of South Africa
2000	Charter of Fundamental Rights of the European Union
1958	Constitution of the Fifth Republic France
1982	Constitution of the People's Republic of China
1993	The Constitution of the Russian Federation

Philosophical rationales for freedom of expression: Intrinsic and instrumental values

The philosophical underpinnings of freedom of expression have profoundly influenced the legal protection of freedom of expression in various jurisdictions. Martin Redish argues that the rationales for freedom of expression are crucial since they determine the scope and what it protects. Philosophical rationales of freedom of speech provide the basis for determining whether kinds of expression, such as literature, art, science, commercial discourse, and political communications (Redish, 1982). Therefore, before analyzing the appropriateness of protecting freedom of expression under Australian law, it is necessary to explore the philosophical justifications for freedom of expression, i.e., why a country's constitution and laws should safeguard its citizens' freedom of expression. Campbell divided the fundamental theories of freedom of speech into three categories, namely the truth rationale, the democratic rationale, and the self-determination rationale (Campbell & Sadurski, 1994). The three rationales describe the value of freedom of expression in terms of its role in discovering the truth, guaranteeing democratic politics and self-fulfillment for citizens; this section splits the three rationales for freedom of expression into intrinsic and instrumental values and analyses the philosophical justification for each dimension.

The Intrinsic value of freedom of expression: Self-determination and individual autonomy

The Enlightenment opened the prelude to developing the contemporary theory of freedom of expression. The Enlightenment broke the fetish for information provided by traditional authorities, such as religion and kings. Enlightenment thinkers argued that people could use reason to discover

knowledge independently; this ideological revolution was seen at the time as “the achievement by the self of its proper autonomy (Campbell & Sadurski, 1994).” Thus, a critical reason speech should be protected is that it enhances the individual’s autonomy. The primary point is that speech is an activity exclusive to humans. It is through the expression of our thoughts that we realize and express our humanity (MacIntyre, 1984). The capacity to connect our thoughts and experiences is asserted to be an inherent part of being human (Roderick et al., 2021). The theory of autonomy rationale emphasizes the intrinsic significance of speech. Freedom of expression is a fundamental human right. Even if the protection of freedom of expression does not further instrumental goals such as liberal democracy, accountable government, or the rule of law, it should nevertheless be protected on the grounds that it is a part of human nature and a fundamental human right.

In *Whitney v California* (1927), Brandeis J held that “those who won our independence believed the ultimate purpose of the United States was to liberate men so they might develop their faculties.” This illustrates that freedom of expression is protected by law in the United States partly because it promotes the free development and self-fulfillment of the human person. Meanwhile, Scanlon argues that if individuals are to be treated as “equal, autonomous, rational actors,” the authority cannot restrict speech only on the grounds that it may induce its audience to develop harmful beliefs or engage in harmful actions (Barendt, 2005). Because humans are rational, it is logical to assume that their statements are also rational; audiences will judge the truthfulness of what they hear based on their rationality and decide whether or not to believe it. Although Scanlon’s views may be too idealistic to deal with the complexities of the current situation where the mass media use their distorted influence to manipulate and control public opinion (Sparks, 2005), this view at least demonstrates that freedom of expression should not be restricted for paternalistic reasons inconsistent with respect for individual autonomy. In short, based on the intrinsic value of speech, any restriction on freedom of expression inhibits self-fulfillment and individual autonomy. Freedom of expression is not only of instrumental value for achieving external ends but also a fundamental human right grounded in the demands for dignity, equality, and respect.

The Instrumental value of freedom of expression: Discovering the truth and safeguarding democracy

The instrumental value of speech is also its external value, which refers to disregarding its intrinsic value, what we anticipate speech to bring us. First, speech is considered to be of great value in discovering truth. Sharon Rodrick contends that freedom of expression should be safeguarded since the truth can only be discovered in all places where ideas circulate freely. If the dissemination of ideas is restricted, falsehood may replace the truth (Roderick et al., 2021); this underlines the significance of an open and free-speech environment for people to discover the truth. Milton believes that a free press is essential for spreading ideas and that the truth will always prevail regardless of what other views are disseminated (Milton, 1904). In *Abrams v United States* (1919), Holmes J’s argument is a vital judicial exposition of the truth rationale for freedom of expression. He held that “the best test of truth is the potential of an idea to gain self-acceptance in a competitive market.” Therefore, to defend freedom of expression is to provide a safe and fair environment for the discovery of truth, where no supreme power beyond the average individual monopolizes the right to speak and where every individual can express his or her views equally.

Many opinions compete fairly in an environment similar to a market economy, and each individual uses their rationality to accept opinions, which is the process of discovering the truth.

Furthermore, freedom of speech is of great significance in safeguarding a liberal democracy, which is also the most prominent manifestation of the instrumental value of free speech. Historically, freedom of expression has posed a grave threat to the authority of authoritarian regimes; hence, authoritarian leaders tend to suppress freedom of expression. In a sense, the struggle for freedom of expression is a battle between democracy and dictatorship. Thus, protecting freedom of expression has always been a core tenet of democratic politics. The instrumental value of freedom of expression for liberal democracy is manifested on two specific levels: one view is that the content of speech is information, and access to information enables citizens to examine the functioning and outcomes of the democratic process more thoroughly, so improving citizens' capacity for decision-making and enhancing the quality of democracy (Campbell & Sadurski, 1994); another view is that the content of speech is a normative or political opinion and that more speech would offer a broader range of political views and moral options (Roderick et al., 2021). It is worth noting that the democratic rationale for freedom of expression occupies a vitally important place in the Australian Constitution. It is a central doctrinal underpinning for the High Court of Australia's recognition of freedom of expression in Australia as only an implied constitutional right. However, the democratic rationale has also led to the fragility of protecting freedom of expression in Australian law. This view will be discussed in more detail below.

In summary, speech has both intrinsic and instrumental value. The intrinsic value of speech is mainly in helping people to self-determine and achieve individual autonomy. The intrinsic value of speech is closely related to our humanity. The extrinsic value of speech is mainly in its role in discovering truth and safeguarding liberal democratic democracy. Intrinsic and instrumental values are not in conflict and are of equal importance.

Methodology

This study employs a doctrinal legal research approach (Christiani, 2016), emphasizing conceptual legal analysis. This methodology involves a thorough investigation of primary and secondary legal sources. The primary sources include the Constitution, case law from various jurisdictions, and international conventions concerning freedom of expression. The author first retrieved primary legal sources. The Constitutions were obtained from official government websites of selected jurisdictions. International treaties related to freedom of expression mainly come from the official websites of the United Nations and other international organizations. The judicial precedents mainly come from the Westlaw legal research platform. In addition, the secondary sources encompass peer-reviewed legal journal articles and law reviews, which are mainly obtained from Google Scholar, Web of Science, and ScienceDirect databases. Keywords include "freedom of speech," "speech freedom," "freedom of expression," "freedom of the press," "fundamental rights," "constitutional protection," "intrinsic value," and "instrumental value."

A comparative legal analysis of constitutional protection for freedom of expression was conducted to assess the Australian constitutional and legal framework for protecting freedom of expression. This legal research approach aligns well with the field of law and ensures verifiability. Another reason for choosing this method is to enhance the trustworthiness of the research findings.

Furthermore, comparative law is widely regarded as the analytical cornerstone of legal science, valued for its meticulous approach to comparing and analyzing legal systems or their components to identify similarities and discrepancies (Orucu, 2007). This study evaluated Constitutions and international conventions focusing on the constitutional framework concerning constitutional protection for freedom of expression. The choice of constitutional texts includes not only common law jurisdictions but also civil law jurisdictions. It includes not only the constitutions of developed countries but also of developing countries. This study attempts to demonstrate the uniqueness of the Australian Constitution in protecting freedom of expression in the world through a comprehensive selection of constitutional texts.

Results and Discussion

The Instrumental Value of Freedom of Expression in the Australian Constitution: The Implicit Freedom of Political Communication

Freedom of expression is one of the most constitutionally protected rights in the world. It is explicitly protected in the Constitutions of various jurisdictions; however, Australia appears to be an exception among Western liberal democracies in that its Constitution does not have explicit provisions to guarantee freedom of expression. The High Court of Australia has confirmed through its jurisprudence that the right to political communication is implicitly guaranteed in the Australian Constitution, which is a manifestation of recognizing the instrumental value of freedom of expression in Australian law. This section of the paper compares the constitutional and legal guarantees of freedom of expression in different jurisdictions. It analyses the underlying reasons for the barely non-recognition of freedom of expression in Australian law, namely the importance of the instrumental value of the freedom of speech and the neglect of its intrinsic value.

A Comparative Law Perspective: Differences in Constitutional Protection of Freedom of Expression in the US, EU and Australia

The First Amendment of the United States Constitution provides the most absolute and comprehensive constitutional protection for freedom of speech; it provides that “Congress shall make no law...abridging the freedom of speech or the press (United States of America, 1791).” In *Whitney v California* (1927), Brandeis J noted that “order cannot be maintained just by the threat of punishment for its violation...no danger flowing from speech can be deemed clear and present unless the incidence of the evil apprehended is so imminent that it may befall before there is an opportunity for a full discussion.” In Europe, freedom of expression is protected by various overlapping documents. First, Article 10 of the European Convention on Human Rights expressly provides for the protection of freedom of expression, with the first paragraph setting out the basic scope of the right and the second paragraph setting out the restrictions on freedom of expression (European Union, 1950). In addition, Article 11(2) of the Charter of Fundamental Rights of the European Union (EU Charter) guarantees the plurality of the media, claiming allegiance to the opposite of a media monopoly, which is also a manifestation of the safeguarding of freedom of expression (Longo & Molek, 2014). At the domestic level, many EU member states have also

included the protection of freedom of expression in their constitutions or other legal instruments. Even in countries that are not widely regarded as democracies, the protection of freedom is also included in the Constitution. For instance, article 35 of the Constitution of China provides that “citizens of the People’s Republic of China shall enjoy freedom of speech, the press, assembly, association, procession and demonstration (China, 1982).” This circumstance accentuates the awkwardness of the Australian Constitution’s lack of direct provisions for protecting the freedom of expression.

Constitutional freedom of expression in Australia: The implied freedom of political communication

Australia is the only Western democracy that does not explicitly protect freedom of expression in its constitution or an enforceable national human rights instrument. Pullan argues the reason is that the establishment of the Commonwealth of Australia was not a revolutionary shift. The consolidation of democracy in Britain and the United States demonstrated the progress of civilization. The authoritarian forces that suppressed free speech were already powerless, so freedom of speech did not require formal constitutional protection. The protection of freedom can be safely left to the common law and the legislature, which represent the fear of the people and are accountable to them (Roderick et al., 2021).

In contrast to the more than two centuries of evolving legal safeguards for freedom of expression in the United States, the High Court of Australia did not recognize the implicit protection of the right to political communication, also known as “freedom of expression”, in Australia until 1992. Section 24 of the Australian Constitution provides that “the House of Representatives shall be composed of members directly chosen by the people of the Commonwealth (Commonwealth of Australia Constitution Act, 1900, s. 24).” This provision is also the basis of Australia’s representative democracy. In *Nationwide News Pty Ltd v Wills Brennan* (1992), J elaborates further on the Constitution’s purpose concerning guaranteeing representative democracy. He held that “to maintain a representative democracy embodying the principles prescribed by the Constitution, freedom of public discourse on political and economic matters is indispensable.” He also noted that “it would be a mockery of democracy to grant the people the power to elect their parliament while denying them the freedom of public discourse from which they derive their political opinions.” Meanwhile, in *Australian Capital Television v Commonwealth*, the majority held that the restrictions imposed by The Political Broadcasts and Political Disclosures Act 1991 (Cth) on the broadcast of political advertising during elections were unconstitutional and invalid because the Act contravened the freedom of political communication implicit in the Australian Constitution.

These two cases are regarded as landmarks in establishing the legal protection of freedom of expression in Australia. The implied constitutional protection of political communication reflects the particular emphasis that the HCA places on the instrumental value, especially the democratic rationale of freedom of expression. As mentioned above, one of the instrumental values of speech, democratic theory, enables voters to freely access and exchange information, enhancing the decision-making capacity and, thus, the quality of democracy. Based on this logic, the judges of the HCA regard the promotion of representative democracy as the premise and sole reason for the Australian people to enjoy the freedom of expression. The freedom of expression enjoyed by the

Australian people is limited to political communication, beyond which the Constitution does not protect any other expression of an individual's ideas, such as artistic expression and non-political speech. In short, the implied acknowledgment of the people's right to political communication in the Constitution is developed to enable voters to exercise their right to vote more effectively, thereby safeguarding Australia's representative democracy.

Instrumental value orientation leads to manifestations of the fragility of freedom of expression in Australia: Inadequate legal protections and coercive restrictions on freedom of expression

As mentioned previously, the Australian Constitution does not explicitly guarantee freedom of expression, and the implied right is confined to political communication. This phenomenon is rooted in the fact that Australian law prioritizes the instrumental value of speech and ignores its inherent value. In Australia, the purpose of freedom of expression is viewed as a mere guarantee of representative democracy, and its independent inherent value is not recognized, resulting in inadequate legal protection and several mandatory limits on freedom of expression. Therefore, rather than asserting that the legal dilemma of freedom of speech in Australia is the result of inadequate legal protection and coercive restrictions on freedom of speech, it is more accurate to say that these phenomena are the result of Australian laws underestimating the intrinsic value of freedom of speech while valuing its instrumental value. This section of the article explores the outcomes of Australia's emphasis on the instrumental value of speech and neglect of its intrinsic value from the perspectives of inadequate legal protection and coercive restrictions on freedom of expression, respectively.

Implied constitutional rights based on instrumental values of speech lead to inadequate protections for the freedom of expression

In Australia, not only is freedom of expression not explicitly protected by the Constitution, but federal and state laws rarely protect it. Only the Australian Capital Territory and Victoria have established human rights laws that safeguard freedom of expression. These Acts are only in force in their respective jurisdictions and have no effect on freedom of expression at the federal level; hence, the primary protection for the freedom of speech in Australia continues to derive from the Constitution's implied right to political communication. This phenomenon contradicts Pullan's anticipation that, even if the Constitution did not protect free speech, a parliament elected by representative democracy would do so by federal and state legislation (Roderick et al., 2021). In Australia, freedom of expression directed by instrumental values is inadequately safeguarded by law for two primary reasons.

First, the HCA's instrumental value-oriented interpretation of the Australian Constitution has restricted the scope of freedom of expression. This has caused individuals to believe that the sole purpose of free speech is to protect representative democracy. For a healthy society, instrumental values such as safeguarding liberal democracy, holding government accountable to the people, and promoting transparency and the rule of law are crucial; however, these are not the total values of freedom of expression. The High Court of Australia's constitutional interpretation of freedom of expression restricts the possibility of Australian law to seek support for other philosophical

dimensions of freedom of expression rationales. In *Theophanous v Herald & Weekly Times* (1994), Dawson J, as the only dissent, showed his opposition to HCA's interpretation of constitutional provisions based on the instrumental value of speech, thereby obtaining the implicit freedom of speech. He held that "the safeguarding of fundamental freedoms in this country is not a constitutional mandate but rather the capacity of a democratic community to maintain its own common values." As a fundamental human right, freedom of expression should be defined not just by constitutional laws and interpretations but also by the community's consensus in a democratic society.

Second, while the HCA's interpretation of the Constitution provides Australians with limited freedom of political communication, this interpretation restricts the ability of federal and state legislation to redefine the content and expand the scope of freedom of expression. Based on the HCA's restriction of freedom of expression to the realm of political communication in freedom of expression cases, the federal and state parliaments may be concerned that expanding the scope of freedom of expression through legislation is contrary to the constitutional guarantee of the scope of freedom of expression, so abandon the adoption of legislation guaranteeing freedom of expression.

Overall, the instrumental value of freedom of expression has led to a homogeneous approach to protecting freedom of expression in Australia. The implied constitutional right to political communication limits the possibility of the Federal and State Parliaments using their legislative powers to extend freedom of expression, ultimately resulting in a lack of adequate legal protection for freedom of expression in Australia.

Implied constitutional rights based on instrumental values restrict freedom of expression

The instrumental value orientation towards freedom of expression has not only resulted in inadequate legal protections, but also led to coercive constraints in Australia. The most significant restriction on freedom of expression in Australia is that the Constitution solely protects political communication. In the *Rabelais* case, the contested issue was apparently whether the law had the authority to prohibit publications that instructed on crime (libertus, 1999). However, the actual question was, what kind of speech can be regarded as implied political communication under the Constitution? In this case, a university student newspaper published a critical commentary on capitalism and poverty, followed by "a step-by-step guide to shoplifting". The censors refused to classify the publication, thus restricting its publication. In *Brown v Members* (1998), The Full Court of the Federal Court held that the main problem, in this case, was that the "step by step guide to shoplifting" was not a political discussion and therefore did not receive protection from the implied constitutional right of political communication.

The *Rabelais* case raises a concern about the scope of political communication. Although it is widely accepted that the publication guiding the offense, in this case, was not "political communication," the definition of "political communication" is so broad and ambiguous that it is as philosophically contentious as freedom of expression. This is likewise the dilemma caused by an over-reliance on a democratic rationale for speech based on its instrumental value. The autonomy of speech as a fundamental human right has been replaced by political communication in the service of representative democracy. However, how can we ensure that all authentic "political communication" is considered implicit in the Constitution and properly safeguarded by the courts?

In addition, even though the Australian Constitution restricts freedom of expression to political communication, this freedom of political communication is not absolute. In *Lange v Australian Broadcasting Corporation* (1994), Lange brought a defamation action against the Australian Broadcasting Corporation (ABC), which relied on the “constitutional defense” established in *Theophanous* to assert its constitutional protection of political communication; however, the HCA unanimously rejected ABC’s assertion of implied political freedoms. The majority of the judges held that “although the Constitution protected the freedom of political communication, implied freedom was not a personal or individual right that might confer private rights in common law defamation cases. The protection was, therefore, not absolute.”

The Lange case not only further restricted the implied freedom of political communication that had developed from the Constitution. More importantly, it generated a “Lange test” in Australia to determine when the implied freedom of political communication would invalidate a law. The test consists of two steps; first, the court needs to examine whether the law effectively burdens free political communication, and if the law does burden that freedom, is it reasonably appropriate and suitable to serve a legitimate purpose consistent with the maintenance of representative and accountable government? In other words, so long as the purpose of the restrictions imposed by law on political communication is consistent with the legitimate purpose of maintaining representative democracy and accountable government, such a law does not violate the implied constitutional protection of political communication, even if it imposes an undue burden on political communication. The Lange test further demonstrates the Australian judiciary’s reliance on speech’s instrumental value as protection for liberal democracy. In order to achieve the instrumental purpose of maintaining a representative and accountable government, freedom of expression, both in the broad and narrower sense, can be further restricted by law. The Lange test’s applicability has brought considerable confusion. As implied freedom is not absolute, it is questionable how far political communication’s protection extends. Due to divergent interpretations, the scope of freedom has remained ambiguous (Sedgwick, 2003). The test application will likely change with each new judicial appointment. All those cases and situations demonstrate the relative fragility of the right to political communication implied in the Australian Constitution.

In summary, in Australia, freedom of expression, primarily in the form of freedom of political communication, is merely an implication of democracy. It does not reflect speech’s intrinsic value in enhancing self-fulfillment and individual autonomy. On the contrary, its value is primarily reflected in the instrumental value of promoting accountable government and safeguarding representative democracy. This has resulted in inadequate protection of freedom of expression in the Australian Constitution and laws and numerous coercive restrictions on freedom of expression.

Conclusion

This study examines the reasons why freedom of expression is barely recognized in Australian law and, through an analysis of the philosophical rationale for speech, concludes that the purpose of freedom of expression implied in the Australian Constitution is not to help people achieve self-fulfillment and individual autonomy, but to protect representative democracy. Australian constitutional and judicial practice reflects an over-reliance on the instrumental value of speech and

a disregard for the intrinsic value of freedom of expression, resulting in inadequate protection and excessive restrictions on freedom of expression under Australian law. Both the intrinsic and instrumental value of speech are of great importance, and an accountable democracy should attach equal weight to both. Liberal democracy is not only an end in itself but also a means of safeguarding people's rights from infringement. It is apparently not the best understanding of the philosophical rationale for freedom of expression if, in order to safeguard democracy, freedom of expression is not adequately protected or is even severely restricted. Due to space limitations, this article does not adequately address the approach to change the insufficient legal protection and coercive restrictions on freedom of expression in Australia. There is potential for further research in these areas.

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Research on Data Security Governance from the Perspective of New Quality Productive Forces

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Abstract

The development of new quality productive forces relies on data as a crucial element. The extensive application and in-depth integration of data have, while promoting innovation and progress in various fields, also given rise to numerous data security issues. By analyzing the inherent logic between new quality productive forces and data security governance, this paper points out the current situation and challenges faced by data security governance in China. In combination with the characterization of legal risks related to data security, it explores the value orientation and basic principles of data security governance, and constructs a multi-dimensional governance path that includes perfecting the legal and regulatory system, strengthening technological safeguards, clarifying the responsibilities of multiple entities, and enhancing international cooperation. The aim is to provide theoretical support and practical guidance for the coordinated development of data security and new quality productive forces, ensuring the safe, orderly, and efficient utilization of data in the development process of new quality productive forces.



Full Text Article



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Keywords: New Quality Productive Forces; Data; Data Security Risks; Data Security Governance

Introduction

In the current digital era, new quality productive forces are emerging vigorously, and their development is profoundly transforming the economic and social landscape. New quality productive forces, as a new form of productive forces represented by “computing power” and the like, rely on the strong support of data as a core element for their development. Data has become an emerging strategic resource following traditional production factors such as land, labour, capital, and technology, playing a crucial role in promoting economic and social development, spawning new industries, new models, and new driving forces. As a key production factor, data runs through all aspects of the development of new quality productive forces.[1] It has become a new type of national strategic resource and a critical element in forming new quality productive forces. From the

optimization of automated production processes driven by production data in intelligent manufacturing, to the innovation of efficient financial services supported by transaction data in the digital finance field, and to the assistance of medical data in precise diagnosis and treatment decisions in smart healthcare, the value of data is highlighted in numerous scenarios of new quality productive forces. However, the large-scale flow, frequent interaction, and extensive application of data have also brought about unprecedented security challenges.

The Data Security Law, which came into effect in September 2021, stipulates that: “The competent departments of industry, telecommunications, transportation, finance, natural resources, health, education, science and technology, etc. shall assume the responsibility for data security supervision in their respective industries and fields. The public security organs and national security organs shall assume the responsibility for data security supervision within their respective scopes of duties in accordance with this Law and relevant laws and administrative regulations. The national cyberspace administration department shall be responsible for coordinating and supervising network data security and related supervision work in accordance with this Law and relevant laws and administrative regulations”. In the practice of data security supervision, it is difficult to trace the clues of data leakage, to screen for potential data security risks, and to track the funds of illegal data transactions. Administrative supervision may restrict the opening and circulation of data and suppress the release of data value while protecting digital security. These problems not only threaten personal privacy and corporate interests but also pose severe challenges to national security, social stability, and economic development.

The Third Plenary Session of the 20th Central Committee of the Communist Party of China emphasized “accelerating the construction of the institutional mechanisms to promote the development of the digital economy and enhancing the regulatory capacity for data security governance”. From the perspective of the development of new quality productive forces, how to achieve the balance between data security and the open utilization of data and how to effectively govern data security risks have become important issues that urgently need to be resolved. Therefore, it is urgent and important to conduct in-depth research on data security governance from the perspective of the development of new quality productive forces.

The Inherent Logic between New Quality Productive Forces and Data Security Governance

Data security governance from the perspective of new quality productive forces is an important concept emerging in the contemporary digital wave, with profound connotations and closely intertwined with the development of new quality productive forces. Driven by scientific and technological innovation, new quality productive forces prompt in-depth transformations in various industries, and data, as a key element in this transformation process, runs through every stage. Essentially, data security governance aims to construct a comprehensive, systematic, and dynamic framework to ensure that data remains in a secure and reliable state within the data environment on which the development of new quality productive forces depends. This governance system is committed to maintaining the confidentiality, integrity, and availability of data through the

comprehensive application of legal norms, institutional constraints, technical support, and management means.

According to Article 3 of the Data Security Law of our country, data security means ensuring that data is in a state of effective protection and legal utilization and has the ability to maintain a continuous secure state by taking necessary measures. Data security under this definition has two implications: First, the state of the data itself is stable, that is, the integrity, confidentiality, and availability of the data are not violated; second, the guarantee ability of external factors is stable.[2]

During the data collection stage, strict compliance with laws, regulations, and ethical guidelines is required to ensure that the data sources are legal and compliant, avoiding the illegal acquisition of sensitive information such as personal privacy, corporate trade secrets, or state secrets. For example, in scenarios where Internet of Things devices are widely used, when intelligent sensors collect data, users must be clearly informed of the purpose, scope, and usage method of data collection, and explicit authorization from users must be obtained to prevent data from being stolen or misused at the source. During the storage process, advanced encryption technologies and secure storage architectures are employed to prevent data from being illegally accessed and tampered with. For instance, when financial institutions store customer transaction data, they use high-strength encryption algorithms to encrypt the data and set strict access permissions. Only authorized personnel can access the data in a specific secure environment to ensure the integrity and confidentiality of the data during storage. In the data transmission link, with the help of secure communication protocols and network architectures, data is ensured to be transmitted safely and accurately between different systems and platforms. For example, in cross-border data transmission, enterprises must comply with the data protection regulations of relevant countries and regions, adopt encrypted transmission channels to prevent data from being intercepted or leaked during transmission, and ensure that the security and integrity of the data are not impaired. When processing and sharing data, strict control of access permissions is exercised to ensure that data is only used for legal purposes by authorized entities and to guarantee the authenticity and reliability of the data. Taking medical data as an example, when hospitals conduct medical research or data sharing, they need to desensitize the data, remove sensitive information that can identify individuals, and strictly limit the scope of access personnel to ensure that medical data provides support for medical research and the improvement of medical services under the premise of legality and compliance, avoiding the illegal use of data or the leakage of patients' privacy.

Data security governance needs to adapt to the characteristics of diversified data application scenarios and complicated data flows brought about by the development of new quality productive forces. With the continuous evolution of new quality productive forces, such as the in-depth integration of artificial intelligence and the manufacturing industry, a vast number of complex data interaction scenarios have emerged. Data security governance should be able to respond flexibly to these changes, promoting the reasonable circulation and efficient utilization of data between different entities and different systems. On the one hand, it is necessary to break down data silos to achieve data interconnection and interoperability, providing rich data resources for the development of new quality productive forces; on the other hand, under the premise of ensuring security, it is necessary to ensure that data can flow smoothly, stimulate the potential value of data, avoid hindering the normal circulation and value release of data due to overemphasis on security, and thus

strike a delicate balance between data security and data value release, laying a solid foundation for the continuous innovation and healthy development of new quality productive forces. Only by achieving the coordinated progress of data security governance and the development of new quality productive forces can we gain the upper hand in the fierce competition in the digital age and promote the economic and social development to a higher level.

The Predicament of Data Security Governance in China

Technical Level: Increasing Difficulty in Data Security Protection

In the current era, the development of new quality productive forces is closely related to that of artificial intelligence, big data, and the Internet of Things. Data is now in a complex environment of multi-technology integration, and the risks it faces are diverse and complex.

Artificial intelligence, relying on scientific and technological means, simulates or creates machines with “human-like” capabilities. It then derives results from vast, complex, and unordered “data sets” by means of algorithmic models and uses these results as the basis for decision-making.[3] However, this data-driven operating mode has numerous potential risks. Due to possible biases in data training or insufficiently perfect algorithm design, artificial intelligence may generate issues of algorithmic bias or discrimination when making decisions, thereby affecting the fairness of decision-making. For example, when a recruitment software uses artificial intelligence to screen resumes, it may, due to the use of mostly successful cases of a specific gender or race in the training data, lead to unfair screening results for other groups, thus limiting the diversity and fairness of talent selection.[4]

Although the extensive application of big data has created enormous value for enterprises and society, it has also brought about serious risks of privacy leakage. On the one hand, the phenomenon of excessive data collection is very common. Enterprises collect a large amount of personal data from users without their knowledge, with incomplete knowledge, or without authorization in order to obtain more information.[5] On the other hand, the improper use of data is also very common. Some enterprises use user data for unauthorized precision marketing and even engage in illegal data transactions, seriously infringing upon users’ privacy rights and causing great interference to users’ personal lives.

The widespread access of Internet of Things devices has exposed data to more “attack surfaces” during transmission and storage. Taking the smart home system as an example, various smart devices (such as cameras, smart door locks, smart appliances, etc.) are interconnected, forming a vast Internet of Things system. Once this system is hacked, users’ living privacy will be completely exposed to criminals.[6] Hackers can easily obtain the real-time images of home cameras, remotely control the opening of smart door locks, or maliciously manipulate smart appliances. This not only poses a direct threat to users’ personal safety but may also lead to unnecessary property losses.

With the development of new quality productive forces, the architecture for data processing and application has become increasingly complex, and traditional governance technologies can no longer meet the actual needs. The distributed characteristics of technological architectures such as distributed computing and edge computing make data storage and processing nodes scattered across different geographical locations and devices. This change has significantly increased the complexity

of data security governance. Since security protection measures need to cover more scattered nodes, any security vulnerability in a node may be exploited by attackers, thereby leading to data leakage or system failures.

Institutional Level: The Lagging and Ambiguity of Legislation

In the context of the vigorous development of new quality productive forces nowadays, data security governance at the institutional level is facing numerous difficulties, with the problems of the lagging and ambiguity of legislation being particularly prominent, which have become the key factors restricting the effective governance of data security.

The formulation of laws itself is a “time-consuming and labor-intensive” major project, making it difficult to promptly respond to the emerging new issues of data security in practice within a short period of time. In terms of data application scenarios, taking the security of autonomous driving data as an example, with the development of autonomous driving technology, vehicles will continuously generate massive amounts of data during the driving process, such as vehicle location, driving speed, road condition information, and passenger information.[7] However, the law lacks clear regulations on the collection, storage, use, and sharing of these data, leaving a significant regulatory gap. In the event of data leakage or abuse incidents, it is difficult to effectively pursue responsibilities and protect rights and interests based on the current laws. Similarly, in the field of genetic data security, genes, as a special and sensitive type of personal information, with their huge value, have attracted the attention of many scientific research institutions and enterprises.[8] However, the law has not made clear provisions on the ownership definition, scope of use, and protection standards of genetic data, making genetic data face the risk of privacy leakage during the collection, research, and use processes.

Data security issues usually involve different legal departments, which poses many coordination difficulties in the application of laws. In terms of cross-border data flows, due to the involvement of laws of different countries or regions, the differences and conflicts between laws significantly increase the complexity of data security governance. For example, the General Data Protection Regulation (GDPR) of the European Union imposes extremely strict requirements on data protection, emphasizing the rights of data subjects and the restrictive conditions for cross-border data transmission; while the United States focuses on industry self-regulation, and its data protection rules vary significantly among different industries.[9] In such circumstances, if an enterprise wants to conduct cross-border data transmission business, it needs to simultaneously meet the legal requirements of multiple countries or regions. This not only increases the operating costs of the enterprise but also seriously hinders the free and orderly flow of data. In addition, the imperfect connection mechanisms between different laws further exacerbate the predicament of data security governance. For example, regarding the issue of data monopoly, the coordinated application rules between the Data Security Law and the Antitrust Law are still not perfect. The Data Security Law mainly focuses on the protection of personal data rights and interests, while the Antitrust Law emphasizes maintaining the order of fair competition in the market. When an enterprise forms a data monopoly advantage by collecting and controlling a large amount of data and uses it to restrict competition or damage user rights and interests, how to find a reasonable

balance point between the two laws and achieve their effective coordination has become an issue that urgently needs to be resolved.[10]

Regulatory Level: Imperfection of the Management System

In the current landscape of data security governance, the problem of the imperfection of the management system at the regulatory level has already become a key factor restricting the enhancement of data security guarantee capabilities, severely impeding the leapfrog development of new quality productive forces.

As important entities in data processing and use, enterprises vary greatly in the construction of their internal data security management systems. A considerable number of enterprises have failed to establish a sound data security management system. For example, the phenomenon of chaotic data classification and grading management is quite common. Enterprises lack scientific and reasonable indicators to classify and grade data, unable to accurately identify the importance and sensitivity of different data types, thus making it difficult to implement effective and targeted data security protection measures.[11] Meanwhile, the problem of unreasonable setting of data access permissions is also very prominent. The division of permissions is either too broad or ambiguous, allowing unauthorized personnel to easily obtain sensitive data, increasing the risk of data leakage. In addition, the division of responsibilities for data security management is not clear. The responsibilities of different departments for data security management are not clearly defined. When data security problems occur, they shift the blame to each other, and there is a lack of an effective supervision and accountability mechanism, unable to form an effective collaborative management mechanism.

Apart from enterprises, some data practitioners and the vast majority of users have a serious lack of awareness of the importance of data security and generally lack the consciousness and basic skills of data security protection. In their daily work, due to varying professional qualities or weak data security awareness, data practitioners may cause data leakage due to improper operations.[12] For example, they may casually share sensitive data, transmit data containing important information to unauthorized third parties without taking necessary security measures, or neglect security norms during data processing and storage. When facing authorization requests from applications, users easily authorize them to obtain excessive personal information, such as location, address book, and chat records, without fully realizing the potential risks of these data being misused. Some malicious applications may use the user data they collect for illegal data transactions, or utilize user data for precise push notifications, advertising harassment, or even fraud.

The Characterization of Data Security Risks

In practice, the meaning of data has always been in a vague state, not only manifested in legislation. For example, in Article 37 of the Cybersecurity Law of China, “personal information” and “important data” are listed side by side; in Paragraph (4) of Article 76, network data refers to various electronic data collected, stored, transmitted, processed, and generated through the network.

However, in the Data Security Law of China, data is the record of information in electronic or other ways. Not only does there exist the problem of circular reasoning in logic, but it is also obvious that the connotations of “data” in different precursor laws are quite different. Even the expression of “data information” has emerged in the academic community. This indicates that the academic community does not have a clear understanding of “data” itself.

Meanwhile, the judicial organs in China have adopted different judgment rules for data crimes in the context of the digital economy. For example, in the case of “Kumike v. Chelaile”, both competition law liability and criminal liability are required to be borne; in the case of “Sina Weibo v. Fanyou”, only competition law liability is required to be borne; in the case of “Shengpin Company Grabbing Toutiao Videos”, only criminal liability is required to be borne. This has made the legal regulation of data crimes even more confusing.[13]

Data is a key element in the digital economy era, with rich meanings and various manifestations in different contexts. In a general sense, data is an abstract symbol that records and can identify objective events, a physical symbol or a combination of physical symbols that records the nature, state, and interrelationships of objective things. In computer science, it is the general term for all conforming media that can be input into a computer and processed by computer programs, including numbers, characters, images, sounds, videos, etc. The broadest sense of the data life cycle includes processes such as data production, collection, storage, management, use, processing, transmission, provision, public disclosure, and deletion.[14] In cross-border financial services, data is the carrier of commercial information of cross-border financial services, such as personal financial information, business operation data of financial institutions, and financial service data. Its flow is frequent and the risks are diverse. In the field of artificial intelligence, data provides the “raw materials” for the operation of artificial intelligence and is the cornerstone of the development and application of artificial intelligence. Its quality directly affects the training effect and generalization ability of artificial intelligence algorithm models.[15] At the enterprise operation level, data resources cover internal business management data of enterprises, user behavior data, data collected by Internet of Things devices, and external data related to the government, society, and upstream and downstream enterprises, running through all aspects of enterprise production and operation.[16]

As the fifth major production factor alongside labor, capital, etc., the value of data can only be realized through exchange. When data is exchanged and flows out of the country, the progress of formulating a country’s laws will inevitably lag behind the development speed of global data technology.[17] Different types of data play important roles in their respective fields, while also facing different security risks and challenges, such as data leakage, data abuse, data monopoly, etc., which require governance and protection through multiple means such as legal, technical, and managerial means. Risk management research is dedicated to studying management means of multi-level management of technical platforms and schemes and various emergency treatments, so as to better control the risks brought by technology.[18]

The focus of the characterization of legal risks lies in distinguishing the data security risks governed by the technical path and those governed by the legal path. The technical path plays a fundamental role in the data security governance system. Through technical methods such as cryptographic technology, access control technology, anonymization technology, data

desensitization, differential privacy, and privacy computing, risks of multi-source data can be mitigated. The legal governance path of data security risks stems from the funnel effect of the technical path.[19] For risks that cannot be solved solely by technical measures, the intervention of legal means is required. Even for those that can be handled by the technical path, the guarantee of the legal path is also needed. In addition, the legal path will also clarify the scale, standard, and scope of the technical path. For example, the Personal Information Protection Law has put forward the bottom-line requirements for data desensitization.[20]

IV. Data Security Governance Driven by New Quality Productive Forces *Adjusting the Value Orientation of Data Security Governance*

Equal Emphasis on Security and Development. Data security is the cornerstone of the development of new quality productive forces. Only by ensuring data security can the stable development of new quality productive forces be guaranteed, avoiding the impairment of productive forces caused by security issues such as data leakage and abuse. Meanwhile, the development of new quality productive forces also provides technical and resource support for data security governance, promoting the innovation and application of data security technologies and enhancing the capacity of data security governance. In the intelligent manufacturing industry, ensuring the security of production data is the prerequisite for the stable operation of the production process, and the development of intelligent manufacturing technologies provides more advanced technical means for data security protection, such as using artificial intelligence technologies for data security monitoring and early warning.

Priority of Protecting Individual Rights and Interests. In data security governance, rights and interests such as personal privacy and property rights should be given priority in protection. The collection, use, and sharing of data must be based on respecting the will of individuals, ensuring that individuals have full rights to know, control, and choose regarding their data. When conflicts occur between the rights and interests of personal data and the commercial interests of enterprises or the interests of the state, individual rights and interests should be protected preferentially within a reasonable range to prevent personal data from being illegally used and infringed. In the digital medical field, patients' personal medical data involves privacy-sensitive information and must be strictly protected to ensure that the data is only used for legitimate medical purposes and shall not be leaked or used for other commercial purposes without the patients' authorization.

Promoting Social Fairness and Innovation. Data security governance should be committed to breaking data monopolies, promoting the fair sharing and circulation of data, providing equal opportunities for small and medium-sized enterprises and innovative enterprises to obtain data resources, and stimulating the innovation vitality of the market. Ensure the fair distribution and reasonable use of data among different entities, prevent those with data advantages from using their data advantages to restrict competition and hinder the development of innovation. By establishing a fair competitive environment in the data market, encourage enterprises and scientific research institutions to innovate based on data, and promote the wide application and continuous development of new quality productive forces in various fields. For example, in the fintech field,

promoting the fair sharing of financial data helps to promote the development of inclusive finance and provides opportunities for more small and micro enterprises to innovate in financial services.

Perfecting the Basic Principles of Data Security Governance

Principle of Legality. Data security governance must be carried out in accordance with the law, and governance measures should comply with the provisions of laws and regulations. Activities such as the collection, storage, transmission, processing, sharing, and destruction of data should all have clear legal bases and follow legal procedures. Data processors should ensure that their actions are within the scope of legal authorization and must not violate the mandatory provisions of laws and regulations. For example, they shall not collect users' sensitive data without the users' consent, nor use and share data beyond the scope stipulated by the law.

Principle of Proportionality. When implementing data security governance measures, the relationship between the effectiveness of the governance measures in ensuring data security and the burdens imposed on individuals, enterprises, and society should be weighed. The governance measures should possess appropriateness, necessity, and balance, avoiding overprotection or over-restricting the flow of data. For example, in the supervision of cross-border data transmission, reasonable supervision measures should be adopted according to the sensitivity and risk level of the data, to avoid hindering international trade and the rational allocation of data resources due to overly strict supervision; for data access control, access permissions should be reasonably allocated according to user roles and business requirements, to prevent the over-tightening of permissions from affecting the normal conduct of business.

Principle of Multiple Co-governance. Data security governance requires the joint participation of multiple entities such as the government, enterprises, social organizations, and individuals. The government should play a leading role by formulating policies and regulations and strengthening supervision and law enforcement. Enterprises, as the main entities of data processing, should assume the main responsibility for data security and strengthen internal management. Social organizations should play the roles of industry self-discipline and supervision. Individuals should enhance their awareness of data security and actively participate in data security protection. All parties should cooperate with each other and share information to form a data security governance pattern with the whole society's joint participation. For example, industry associations can formulate industry data security standards to guide enterprises to standardize their data processing behaviors; users can participate in data security supervision through reporting and other means to jointly maintain the data security environment.

Conclusion

In the context of new quality productive forces, data is rich in connotations and has a profound impact on economic and social development. Data security governance is a complex and urgent task. The existing legal provisions in China need to continuously adapt to the development characteristics of data elements. By perfecting relevant legal systems, balancing the interest relationships of all

parties, and ensuring the legal, secure, and effective utilization of data, the continuous and healthy development of new quality productive forces can be promoted.

Through in-depth analysis of the connotations and challenges faced by data security governance, clarifying the value orientation and basic principles, and constructing a comprehensive governance path, including perfecting the legal and regulatory system, strengthening technical safeguards, clarifying the responsibilities of multiple entities, and strengthening international cooperation, data security issues can be effectively addressed, and the coordinated development of data security and new quality productive forces can be achieved. This will not only help protect individual rights and interests, corporate interests, and national security but also promote the healthy development of the digital economy and social fairness and innovation.

In future development, continuous attention should be paid to the new developments and new issues of data security governance. Further strengthening of collaborative cooperation in all aspects should be carried out, continuously optimizing governance strategies and measures, and continuously optimizing the data security governance system to continuously enhance the data security governance capacity. With a solid data security guarantee, a foundation can be laid for the vigorous development of new quality productive forces, promoting high-quality development of China's economy in the digital age, occupying a favorable position in the global digital economy competition, and perfecting data security governance strategies in line with the times to ensure that data security and the development of new quality productive forces promote and progress in coordination with each other.

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Conflict of Interest

The authors declare no conflict of interest.

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Formation and Evolution Mechanism of Internet-Famous Spaces: A Case Study of Yulin Community in Chengdu, China

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Abstract

In the digital era, "digital media" has demonstrated an increasingly powerful capacity to shape spatial environments, giving rise to new urban and rural spaces represented by popular online spaces. As a fusion of digital media and physical spaces, the formation and evolution mechanisms of popular online spaces present a novel and urgent research agenda in urban theory. This paper introduces the concept of "media space" and analyzes the threefold attributes of "digital media space": user-constructed virtual scenarios, deterritorialized data tags, and flexibly produced traffic-oriented commodities. Based on the "media-people-space" perspective, the study establishes the interactive logic between digital media space and physical space, elucidating the processes through which media users and related stakeholders collaboratively participate in the formation and evolution of popular online spaces. Using "Yulin Community in Chengdu" as a case study, this paper provides an empirical analysis. Finally, it advocates for spatial planning to focus on the expansion of its scope from physical spaces to media spaces, emphasizing the proactive guidance of media space creation and virtual-real interactions.



Full Text Article



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Keywords: Digital media, Internet-famous space, Space formation, Evolution mechanism, Chengdu City

Introduction

From the print era to the digital age, each revolution in mainstream media has reshaped how humans perceive and transform the world. However, no previous era has paralleled the digital age in systematically reshaping human spatial perception and behavioral logic through the pervasive penetration of media into daily life. The digital media era has witnessed the emergence of new urban and rural spaces, with "internet-famous spaces" being a particularly notable phenomenon. These spaces typically refer to physical locations that attract significant online attention. In recent years, places such as "Zibo Eight Bureaus ('淄博八大局' in Chinese)" and "Chengdu Disneyland ('成都迪士尼' in Chinese)" have emerged and evolved in unexpected ways.

As hybrid entities integrating digital media and physical spaces, internet-famous spaces present pressing questions regarding their formation and evolution. Existing studies have explored the formation mechanisms of these spaces from perspectives such as visual consumption and cultural capital [1-3], analyzed their spatial distribution and influencing factors [4-7], and examined their impact on spatial perception and behavior [8-11]. However, the unique characteristics of digital media and the interaction mechanisms between media and space have yet to be adequately addressed. To fill this gap, this paper combines urban studies with media studies by introducing the concept of "media space". It aims to analyze the features of digital media and digital media spaces, construct the interaction logic between digital media spaces and physical spaces, and use "Yulin Community in Chengdu" as a case study. This research seeks to provide insights into urban theory in the digital age and inspire interdisciplinary studies across fields.

The Concept and Virtual-Real Relationship of Media Space

Media are tools for storing and disseminating information, while media space refers to the representation of spatial information within media—essentially a virtual space that exists in a specific medium. The term "media space" was first introduced by media scholar John Hartley [12], who argued that television constructs a diverse, interactive, and symbolic media space through language, images, and sounds [13]. As a product of interactions among media, humans, and physical spaces, media space naturally exhibits a dynamic virtual-real interplay with physical space (Figure 1). Content creators within media systems gather information from physical spaces, which is then processed and presented as media space. During dissemination, media space influences audiences' spatial perceptions and decision-making, prompting corresponding behaviors in physical spaces. These behaviors, in turn, further shape the state of the physical space.

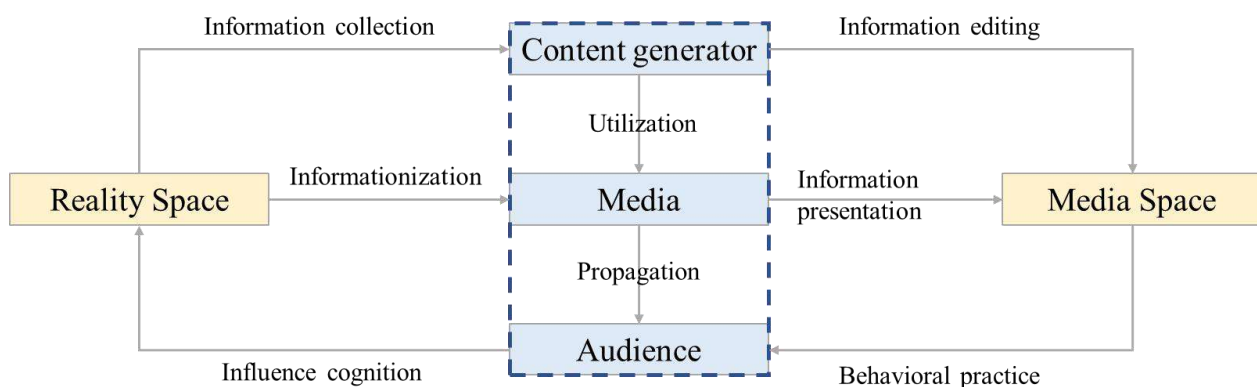


Figure.1 The interaction logic between media space and reality space

The characteristics and real-world impact of media spaces are shaped by the nature of the media itself. In the print era, media spaces were primarily composed of text and images, with their expressiveness and influence significantly constrained. With the advent of the electronic age, video dissemination technologies enabled media spaces to be presented in a more multidimensional and diverse manner. David Harvey observed that spatial representation in postmodern films exhibits fragmentation, heterogeneity, and multilayered characteristics [14]. Similarly, Mike Crang pointed out that while literary works assign new meanings to places through descriptive language, films create new virtual spaces through cinematic techniques and narrative structures. The latter are more spatially representative and more capable of shaping people's spatial imagination and sense of identity [15]. With the arrival of the digital age, the expressiveness, richness, and immediacy of media spaces have grown exponentially. As a result, the spatial representations within digital media-referred to as digital media spaces-have become particularly impactful on social behaviors and the dynamics of physical spaces.

Mechanisms of Formation and Evolution of Internet-Famous Spaces Driven by Digital Media

Internet-famous spaces are essentially a fusion of "hotspot" media spaces and physical spaces. The formation and evolution of these spaces represent an interactive process between virtual and physical spaces, driven by digital media and involving the participation of media users and relevant stakeholders (Figure 2). This process highlights the multifaceted shaping power of digital media systems on both media spaces and physical spaces.

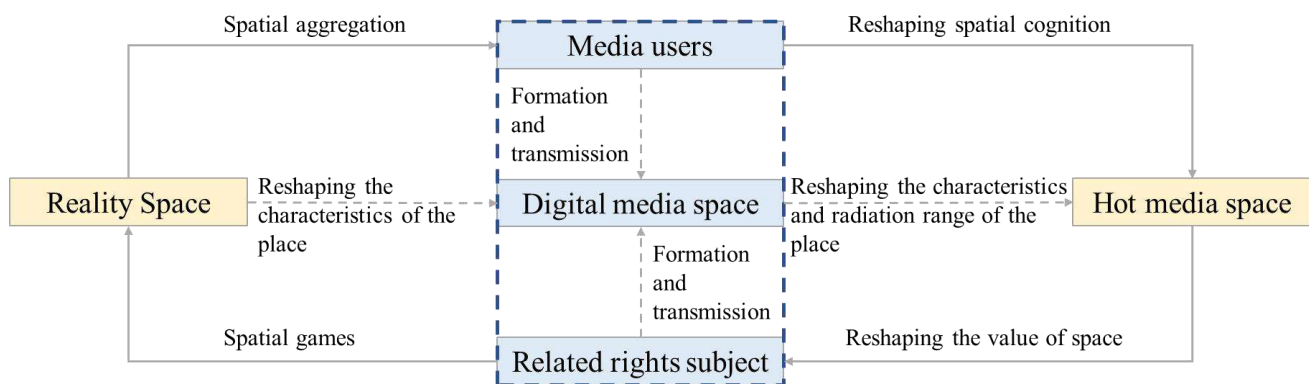


Figure.2 The formation and evolution mechanism of internet celebrity space

1. Reshaping Physical Spaces into Media Spaces

The formation of internet-famous spaces involves the generation and dissemination of hotspot media spaces, representing a process in which digital media virtually reshape physical spaces. During the information generation phase, creators of media spaces selectively emphasize or downplay certain spatial information based on social, commercial, or other objectives. This process enhances less perceptible characteristics of physical spaces (e.g., the information surrounding "Zibo Barbecue" highlights the hospitable cultural connotation of locations like the "Eight Bureaus

Market") or assigns entirely new attributes to these spaces (e.g., community parks being repurposed as festive "Chengdu Disneylands").

In the information dissemination phase, users further reshape media spaces through interactions such as likes, comments, and shares, influenced by their spatial experiences and emotions. Two scenarios may logically arise during this phase: 1) Public rationality: Differences between media spaces and physical spaces are corrected, causing media spaces to converge with physical spaces; 2) Public emotion: Differences are amplified, sometimes creating entirely new spatial attributes.

In practice, however, non-mainstream, idealized, or "anti-reality" characteristics tend to garner more attention and evolve into hotspots, making the second scenario more likely to generate internet-famous spaces. Overall, digital media transform the "objective reality" of spaces into "symbolic reality"-a virtual representation optimized for dissemination-and eventually reshape the "subjective reality" embedded in societal consciousness.

2. Media-Driven Transformation of Physical Spaces

Spatial Convergence of Media Users

Media users, influenced by "media cultivation", engage in spatial convergence behaviors such as "media pilgrimages", reshaping the functions and hierarchies of physical spaces. Media cultivation refers to the process by which individuals' perceptions align with media representations over time [16]. As hotspot media spaces emerge, media users' perception of physical spaces shifts, leading them to treat the attributes presented in media spaces as "reality". This often results in symbolic travel behaviors, or media pilgrimages, where users visit prominent locations depicted in the media [17]. Unlike traditional media-era practices motivated by emotional attachment to places ("topophilia"), digital media pilgrimages are often highly utilitarian, emphasizing actions such as check-ins, live streaming, and other activities aimed at garnering visibility. This shift reflects a new "place-display complex", contrasting with the traditional "place-affection complex". Following the guidance of media spaces, media users, as new participants in physical spaces, redefine these spaces through their spontaneous activities.

Spatial Negotiation Among Stakeholders

The spatial convergence of media users creates conflicts of interest among existing space users, local governments, and other stakeholders, resulting in multi-party spatial negotiations. The influx of media users disrupts the original supply-demand equilibrium of physical spaces, imbuing them with new functional and market values. These changes can lead to intense conflicts between media users and original users, manifesting in exclusionary phenomena such as "delocalization" or "demediation". Local governments, driven by governance goals related to regional development and social stability, play a critical role in mediating these conflicts and guiding "positive" spatial behaviors. Compared to media users, original space users and local governments possess greater control over spatial configurations and can reshape physical spaces through material modifications and regulatory measures. The outcomes of these spatial negotiations vary across contexts, resulting in different trajectories for spatial transformation: 1) Media-oriented transformation. Physical spaces are reshaped to align with media spaces; 2) Preservation-oriented transformation. Efforts are

made to restore the original attributes of the space; 3) Compromise-oriented transformation. Spatial adjustments balance the interests of all parties.

3. Dynamic Integration of Virtual and Physical Spaces

The evolution of internet-famous spaces often entails iterative interactions between digital media spaces and physical spaces, culminating in their eventual integration. As media users and stakeholders transform physical spaces, these modified spaces may give rise to new hotspot media spaces, characterized by novel scenes and attributes, thus initiating a new cycle of virtual-physical interaction. Due to the labeling and commodification inherent in digital media spaces, the spatial behaviors of media users and stakeholders are closely monitored, serving as material for creating new media spaces. Over time, however, as the traffic and attention associated with hotspot media spaces wane, the utilitarian media pilgrimage behaviors gradually subside, and the virtual-physical interaction diminishes until it largely ceases. Through continuous cycles of virtual-physical interaction, the disparities between media spaces and physical spaces gradually narrow, ultimately converging toward a unified state.

Case Study

"Chengdu Disneyland" was originally a community park located in Yulin Seventh Lane, Wuhou District, Chengdu. The park is surrounded by open residential areas built during the 1980s. In April 2024, a surreal online parody movement transformed this modest park, equipped with only a single amusement facility, into a viral sensation nationwide. It quickly became a must-visit destination, sparking spatial conflicts among tourists, local residents, and the municipal government. Despite its seemingly absurd and contentious emergence, the "magical" evolution of this urban micro-space vividly demonstrates the profound influence of digital media on shaping spaces. It provides critical insights into the virtual-physical interaction mechanisms underpinning the formation and evolution of internet-famous spaces.

1. A Carnival Park Detached from Reality The "Nomi" Rebellion Space

In March 2024, the rapper "Nomi", frustrated after being eliminated by mentor "Xie Di" on a talent show, posted a music video online. The video featured him fiercely performing his song "Xie Di Xie Di, I want to diss you (‘谢帝谢帝，我要鄙视你’ in Chinese)" while pedaling on a fitness machine in the community park at Yulin Seventh Lane. The machine, resembling a seesaw, was chosen by Nomi to showcase his muscularity and defiance, as he explained during a livestream. However, the exaggerated expressions, clumsy movements, and humorous lyrics unintentionally sparked online debate. Viewers mocked his awkward English pronunciation, interpreting "diss ni (‘你’ in Chinese)" as sounding like "Disney". This misinterpretation gave rise to the park's nickname, "Chengdu Disneyland", injecting an element of irony into the space and initiating its transformation into a hotspot media space.

The "Apple Sister" Carnival Park

Online influencer "Apple Sister", known for her humorous videos, recognized the potential for viral attention and redefined the community park as an alternative carnival park-"Chengdu Disneyland"-through her own short videos. On April 2nd, she posted a video titled "Xie Di, I Want Disney" on the platform Douyin (TikTok in China), in which she performed exaggerated rap in eccentric outfits in the community park. Her antics sharply contrasted with the calm elderly man exercising in the background. However, the video initially did not garner widespread attention. On April 3rd, she returned to the park to repeat a similar performance and uploaded another video, this time recording a university student who happened to be visiting the park as a "rapper" enthusiast (a student from a nearby school) with a caption claiming, "Chengdu Disneyland's popularity has reached the point where people are fighting for spots to check in". She named the community park "Chengdu Disneyland", and despite few people actually visiting the park, exaggerated the check-in behavior for promotional effect.

This video immediately sparked public enthusiasm, accumulating 360,000 likes on the same day and eventually reaching 678,000 likes, becoming the most liked video related to "Chengdu Disneyland" across platforms. It also contributed to the growing popularity of the previous video. The audience primarily consisted of young people from various provinces (Figure 3). In the video, the park's original function of serving residents with fitness facilities was overshadowed, transforming into a carnival space for showcasing unconventional behaviors. The viral success of "Chengdu Disneyland" was fueled by media users' fascination with "meme" culture and the allure of non-mainstream behaviors.

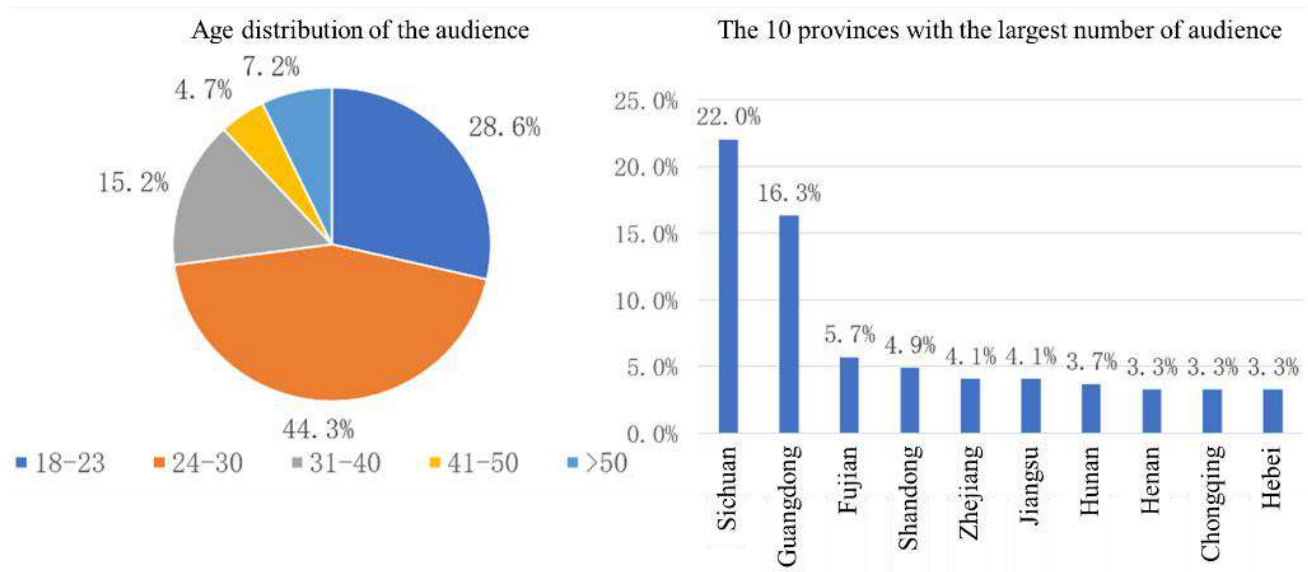


Figure.3 User profile of top stream videos

2. The Transformation of the Carnival Park

Media Users' Convergence and Carnival

Inspired by "Apple Sister" and "Nomi", starting on April 4th, the community park saw a significant influx of visitors, including those filming themselves, live-streaming, and crowding

around to watch "Apple Sister's" performances. The foot traffic around the park surged noticeably (Figure 4). Among the crowd, some loudly rapped and encouraged onlookers to join in, creating an atmosphere reminiscent of a "grassroots music festival". Driven by the online influencers' calls and media-induced excitement, more and more onlookers joined the "carnival", chanting "I want Disney". This enthusiastic participation even included elderly individuals and children. The community park underwent a tangible transformation into a carnival space, where people expressed themselves, vented their emotions, and sought attention. Meanwhile, the behavior of the media users became the raw material for the creation of new media spaces, reinforcing the park's identity as a carnival zone. A flood of provocative titles and vivid videos began circulating, such as "There are 100 million people in Chengdu, and 10,000 are at Chengdu Disneyland", "If you're unhappy, come to Chengdu Disneyland", and "Chengdu Disneyland's opening day", each of which garnered tens of thousands of likes.

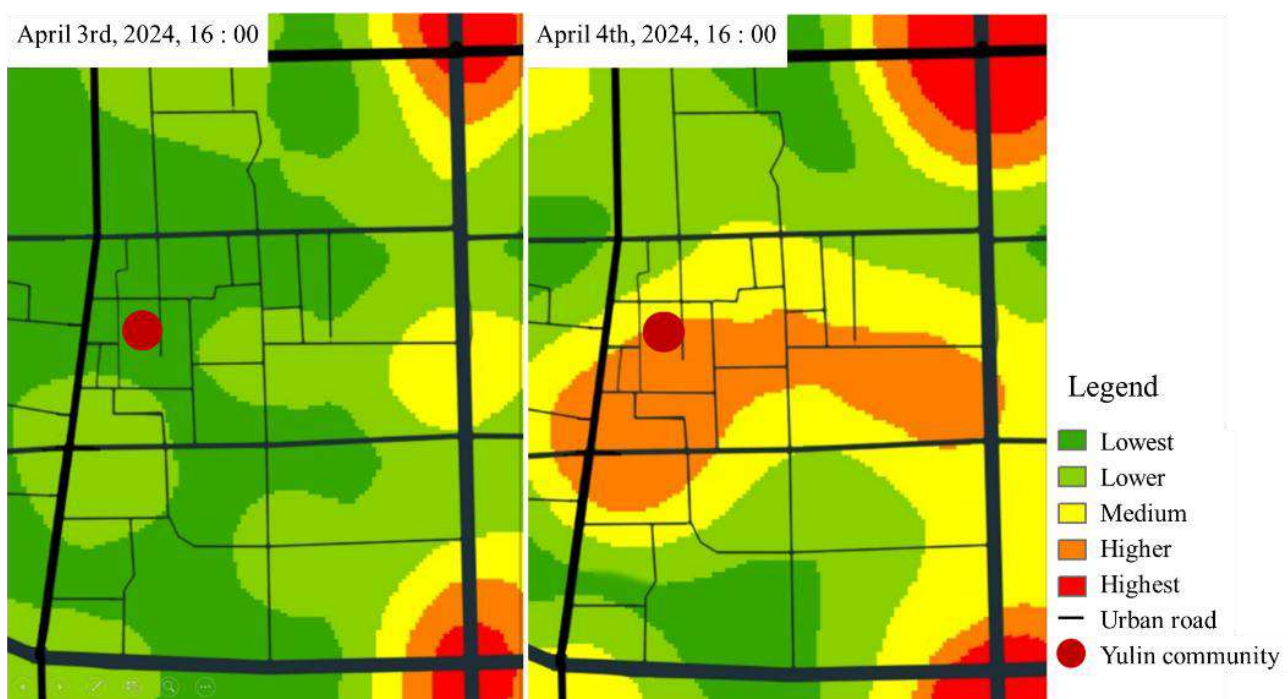


Figure.4 Changes in pedestrian flow and heat around Yulin community during the same period

Intervention by Residents and Community Committees

The gathering and carnival of media users not only overcrowded the already limited community park but also disturbed the normal lives of the surrounding residents due to the noise generated. Faced with escalating, even 24-hour, carnival-like behavior from media users, residents began to lodge complaints with the community committee to express their dissatisfaction. In response, the committee did not simply close the park or continue to tolerate the media users' behavior; instead, it implemented a compromise by improving the space to accommodate the demands of all parties involved. The community committee initiated beautification efforts and refined management strategies to transform the park into a more organized, tourist-like destination. They enclosed the

corner of the park where the key attraction (the fitness machine area) was located, erected signage for "Chengdu Disneyland", and established designated entry and exit points. They also set clear opening and closing hours and restricted the maximum number of visitors (20 people at a time), while enforcing a strict ban on loud noise during check-ins. Under the committee's guidance, residents were mobilized to become volunteers who would help maintain order during visits to "Chengdu Disneyland". Starting on April 6th, media users who wished to visit had to follow the new guidelines and enter the park in an orderly manner. With the joint involvement of the residents and the community committee, the space was restructured into a tightly controlled tourist attraction.

3. The Community Park After the Carnival

The community committee's transformation of the park was recorded by media users and redefined the park's space with qualities that symbolized Chengdu's inclusive culture, sparking a new round of virtual-real interaction. On April 6th, a short video documenting the transformed Chengdu Disneyland, titled "Chengdu is truly a very inclusive city", became the new viral sensation, amassing 286,000 likes. However, the "disciplined" characteristics of the park did not align with the initial expectations of many media users who had been drawn to the "Chengdu Disneyland" for its free expression and unrestricted release of emotions. As a result, negative videos and comments about the "silent" check-ins, restricted visitor numbers, and other limitations began to proliferate. The changes to "Chengdu Disneyland" rapidly diminished its online popularity. After a week of viral fame, no new videos received more than 10,000 likes, and the physical foot traffic to the park also drastically reduced. By the second week, the number of visitors had returned to levels seen before its sudden popularity. By June 2024, although some visitors still occasionally came for check-ins, the barriers and facilities had been dismantled. "Chengdu Disneyland" had faded into history, and the community park had returned to being a fitness space for local residents. Throughout this process, while the community committee successfully balanced the needs of the residents and media users, the transformation did not fully capitalize on the influx of attention brought by the "Internet celebrity" space, missing an opportunity to turn the viral flow into a catalyst for local development.

Discussion

Digital media space has become an essential basis for human perception and spatial practices. As digital media continues to evolve, the presentation of space will become increasingly rich, and the relationship between virtual and real spaces will grow even closer [18]. Consequently, media space is undoubtedly an important area for theoretical exploration and practical engagement within spatial planning. The significant influence of digital media space on human activities will inevitably generate new demands for space use, offering new digital momentum for urban development, which urban planning must actively address.

1. Adapting to New Spatial Demands of Digital Media Users

The widespread emergence of "Internet celebrity" spaces reflects the new spatial demands of digital media users. It also highlights the collective demands of various subcultures in a relatively egalitarian online environment and their struggle for rights to real-world spaces. Spatial planning needs to fully consider the presence of such "Internet celebrity" spaces in cities, understand the socio-economic motivations behind their creation, and guide the spatial practices of digital media users in a way that maximizes benefits and minimizes risks. Urban renewal planning and design should be carried out in response to the spontaneous emergence of "Internet celebrity" spaces and their surrounding areas. Spatial planning should be seen as a way to realize the ideal representations and characteristics of digital media spaces, as well as a means to mediate the conflicts between media users and original space stakeholders. By rationally planning space, the online traffic generated by digital media spaces can be transformed into tangible social and market value. On the one hand, by carefully managing space development and implementing dynamic updates, planners can avoid the short-lived nature of "Internet celebrity" spaces, ensuring their sustained popularity. On the other hand, by developing the surrounding resources of "Internet celebrity" spaces, planners can further amplify the positive influence of these spaces on the neighborhood or even the entire city, helping to create "Internet celebrity" brands that combine regional characteristics with diversity.

2. Opening New Frontiers in Digital Media Space Planning

Spatial planning must proactively engage in the creation and dissemination of media spaces, actively planning and developing "Internet celebrity" spaces to expand the scope of planning from physical spaces to media spaces. In an era characterized by growing land scarcity, stagnating spatial growth, and tightened fiscal conditions, spatial planning faces significant challenges in transforming and adapting. A key issue is how to revitalize urban existing spaces and improve their operation—an essential question for spatial planning and a crucial driver of urban renewal. There is a need for spatial planning to further expand its disciplinary boundaries, actively incorporating knowledge from related fields like communication studies, and opening up new territories in the planning of digital media spaces. Digital media spaces are gradually surpassing physical spaces to become the "primary space" in social perception. Spatial planning should explore and accumulate methods for designing media spaces, seeking the best ways to present physical spaces within digital media, and using superior presentations of digital media spaces as key criteria in selecting physical space planning and design solutions. The goal is to create the best experience where media and physical spaces mutually reinforce each other. Through the planning and design of media spaces, the unique characteristics of real-world spaces can be highlighted, enhancing their influence, fostering social consensus, and continuously driving urban renewal. By utilizing low-cost, digitally generated media spaces as catalysts, spatial planning can attract online traffic and transform it into digital capital that supports the ongoing revitalization of cities.

3. Constructing New Forms of Public Participation Based on Digital Media

For areas where planning is about to be implemented, it is essential to conduct a diversified analysis of existing digital media spaces and create designs that incorporate digital media,

establishing a public participation model that spans the entire planning process. In the field investigation phase, big data analytics and artificial intelligence should be employed to gather information on existing digital media spaces from platforms like Weibo and Little Red Book. This will help understand how media users perceive and evaluate the current state of the space. During the initial design phase, thematic digital media spaces should be created, symbolizing the start of the planning process. These spaces can reflect the design team's preliminary understanding and vision for the area. The digital media content should be spread through channels such as influencers and official organizations, while gathering feedback and suggestions from media users.

It is important to develop and apply interactive feedback tools for digital media spaces. For example, creating an "interactive map" where the public can submit more direct and precise feedback by marking locations in the urban space. Throughout the planning process, digital media space content should be updated dynamically, sharing planning information with the public in a timely manner. Moreover, combining technologies such as augmented reality (AR) and virtual reality (VR) to create virtual city models or demonstration projects can enrich the presentation of digital media spaces. This allows the public to more intuitively "experience" the planning proposals and continuously generates advertising effects for future investment and operations.

Conclusion

With the advent of the digital age, "digital media" has demonstrated an increasingly powerful capacity to shape space. The continuous emergence of new phenomena such as "Internet-Famous Spaces" calls for the enrichment and refinement of urban theories. This study combines urban research with media studies, introducing the concept of "media space", and analyzes the triple attributes of digital media space based on the three-dimensional features of information presentation, communication mechanisms, and business models in digital media. These attributes are: user co-constructed virtual scenes, de-territorialized data labels for dissemination, and the flow commodities produced through flexible production processes. Furthermore, from the perspective of the "media-people-space" interaction, the paper constructs a dynamic logic of the interaction between digital media space and physical space, including the transition from real to virtual, from virtual to real, and the fusion of both. This framework systematically explains the formation and evolution mechanism of influencer spaces, driven by digital media and involving the participation of both media users and relevant stakeholders. Using the "Chengdu Disneyland" case study, the article examines how a community park unexpectedly transformed into a festive wonderland and gradually reverted to its original function. The significant impact of digital media space on human activity is bound to create new spatial usage demands and provide new digital momentum for urban development. Urban planning must explore the expansion of objects from real space to digital media space and strengthen positive guidance for the interaction between these spaces.

Nowadays, theories and empirical research on digital media space are still in the exploratory stage, with vast interdisciplinary research potential. This paper primarily introduces the concept and characteristics of digital media space and explores the mutual relationship between media, people, and space in the formation and evolution of influencer spaces. In reality, as digital media continues to develop, the types of influencer spaces are becoming increasingly diverse, and the differences in virtual and real interactions behind different types of influencer spaces warrant further analysis.

Additionally, the impact of digital media space on physical space is not limited to the creation of influencer spaces. For instance, digital media space influences the location of communities, leading to shifts and differentiation in commercial spaces, affects the city's image, resulting in the evolution of urban industries and spaces, and alters preferences for public activity spaces, giving rise to mixed virtual and real spaces such as citywalk routes. Overall, the new phenomena in urban and rural spaces in the digital age can all be analyzed through the lens of digital media space. Under the overall framework of "media-people-space", these phenomena offer deeper and more comprehensive explanations, and related research awaits further development.

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Conflict of Interest

The authors declare no conflict of interest.

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Innovation reform and the practice of the sector-training integration mechanism in vocational education: a case study of cooperation with Mingkanghui Eco-Agriculture Group

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Abstract

Reforming and innovating the industry-education integration mechanism in vocational education is an important topic in the current educational field. The goal is to closely connect industry needs with vocational training to improve students' professional qualities and skills, thereby supporting economic growth and industry upgrading. Through policy support and school-enterprise collaboration, vocational schools and businesses jointly develop courses, organize internships, and provide practical training, helping students enhance their hands-on skills and employability. Industry-education integration goes beyond school-business connections; it also includes aligning majors with industry demands and course content with professional standards, among other levels. Building innovative platforms for integration, improving policy frameworks, and promoting high-quality vocational education are all vital to meet industry needs and achieve a precise match between the supply and demand for technical and skilled talent.



Full Text Article



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Keywords: Vocational Education, Industry-Education Integration, School-Enterprise Cooperation, Talent Training

Introduction

Industry-education integration in vocational education is a talent training model that closely links industry demands with educational cultivation, focusing on effectively aligning educational resources with industrial needs. This model not only helps improve students' professional qualities and skills but also plays a significant role in promoting economic transformation and industrial

upgrading [1]. The National Development and Reform Commission, together with the Ministry of Education and six other departments, jointly issued the "Vocational Education Industry-Education Integration Empowerment Action Plan (2023-2025)," proposing 19 policies across five areas to promote the high-quality development of industry-education integration in vocational education. The plan emphasizes coordinated solutions to the disconnection between talent training and industry development, innovatively building platforms for industry-education integration, continuing pilot projects for industry-education integration, and improving comprehensive policy systems that provide incentives and empowerment [2]. Furthermore, the National Development and Reform Commission and other departments are actively advancing the construction of pilot cities and industry-education integration enterprises to better integrate industrial needs into the entire talent training process [3].

School-enterprise cooperation is an essential path for the development of vocational education, with enterprises being a key player in vocational education. Many vocational schools collaborate with enterprises to jointly develop courses, combining business practices with classroom teaching to enhance students' practical skills and employability [4]. Industry-education integration involves not only simple school-enterprise connections but also the alignment of majors with industries, schools with enterprises, course content with vocational standards, and teaching processes with production processes across multiple levels [5]. The purpose of this deep cooperation is to integrate educational and industrial resources effectively, promote students' vocational skills training, and meet the talent needs of industrial development. The essence of industry-education integration in vocational education is to achieve comprehensive integration between the industry chain and the talent chain, fostering a highly complementary, integrated, and collaborative relationship [6]. This cooperation model not only promotes in-depth alignment between industry and education but also enables precise matching between the supply and demand for skilled technical talent, forming an educational partnership between government, industry, businesses, and schools. Schools and enterprises can share resources and complement each other's strengths. Moreover, industry-education integration highlights cross-sector cooperation, dual ownership, and dynamic adaptability [1]. This means that industry-education integration is not just a vocational education model but also a new type of social relationship that involves multiple stakeholders such as government departments, industry associations, enterprises, and educational institutions, thereby better aligning educational content with market needs to improve students' practical skills and employability. In practice, the implementation of industry-education integration includes strategies such as resource integration and contractual cooperation, as well as cultural, institutional, model, professional, and curriculum integration. These approaches and strategies together form the practice path of industry-education integration, aiming to deepen the collaboration between vocational education and industry through diversified cooperation models and innovative mechanisms.

The reform, innovation, and practice of the industry-education integration mechanism in vocational education is a key topic in the current educational landscape. This mechanism aims to strengthen the close link between schools and industries, ensuring the effective alignment of educational content with job market requirements, thereby enhancing graduates' employability and adaptability. The core of industry-education integration is to connect vocational education closely with industry development, ensuring that educational content and training models can respond promptly to market changes and business needs. For example, by visiting enterprises and

conducting surveys of social needs, schools can gain in-depth insights into employers' requirements regarding the knowledge, abilities, and qualities of graduates, and adjust course content and teaching plans accordingly. This approach not only helps enhance students' practical abilities but also boosts their competitiveness in the job market [7]. Many vocational schools have established close partnerships with enterprises to jointly develop talent training plans and teaching programs, conduct on-demand training, and internship projects, providing students with more real-world work environments and practical opportunities. For example, our school, Zhejiang Business College's School of Economics and Management, signed a school-enterprise cooperation agreement with Hailiang Group's Mingkanghui Ecological Agriculture Group Co., Ltd., combining the characteristics of the enterprise and the actual situation of the major, focusing on deep school-enterprise integration, with high-tech skills talent training as the core, using teaching models and curriculum reform as the link, to explore building a new talent training mechanism that meets the needs of industry and enterprises. This involves aligning the program setup with industry needs, teaching processes with production processes, and course content with vocational standards and job skill standards to enhance the quality and relevance of talent training.

Over more than a decade of practical school-enterprise cooperation, industry-education integration has undergone beneficial exploration from shallow to deep levels. Deepening industry-education integration is the fundamental path for developing modern vocational education in the new era. Schools and enterprises jointly explore and implement professional talent training as dual stakeholders, deeply integrating technology, faculty, culture, and human resources. Through an enterprise-oriented training approach and vocational training processes, both parties participate throughout in designing and implementing training programs, evaluating outcomes, and jointly nurturing talent. The "Thousand Hours Plan" and industry-education integration serve as entry points, integrating enterprise human resource management with school teaching resources to create a shared training system and resource library, covering school professional education, internal enterprise training, and continuing social education. This includes integrating full-time teachers with enterprise trainers. Ultimately, an integrated training system both inside and outside the school is established to facilitate joint development of schools and enterprises and mutual benefits for both students and employees.

Strengthening Top-Level Design: Establishing a "Party Building & Industry-Education" Integration Mechanism with Dual-Line Promotion

A leadership group was established for the "Professional Ideological and Political Education + Industry-Education Integration" initiative, with the Party Secretary of the College General Branch as the primary person in charge. The group's top-level design focuses on "dual-color leadership and tripartite collaboration." It builds an organizational leadership system based on a "three-level linkage" model involving the College Party General Branch, Professional Party Branch, and Enterprise Party Branch, with a "progressive leadership" approach. This structure forms a work framework characterized by unified leadership of the General Branch, joint management by both party and administration, coordination led by school-enterprise branches, collaborative school-enterprise action, and implementation by enterprise Party branches and research offices. The

College Party General Branch firmly implements the national strategy for innovation-driven development, with the vocational education goal of fostering a high-skilled talent workforce to support national reform and development. It emphasizes talent co-development between the college and enterprises, broadens the concept of "collaborative education involving schools, industries, enterprises, and society," and solidly promotes the "Party Building + Industry-Education Integration" cooperation model. The model establishes a talent cultivation mechanism involving joint training, faculty assistance, shared base construction, joint internship training, project co-promotion, and collaborative technical research.

Deep Collaboration Among Schools, Industries, Enterprises, and Communities: Exploring New Ideas for Party Building

The College Party Branch signed a "paired co-building" agreement with Mingkanghui Ecological Agriculture Group Co., Ltd. The partnership aims to create a new Party building framework of "resource sharing, complementary advantages, mutual promotion, and joint improvement" under the theme of "Party Building Leads Synergy, Industry-Education Integration Promotes Development."

Establishing a "1+1+1" New Training Path: Leveraging Ideological and Political Education

The College follows the principle of combining "going out" and "bringing in" through a three-phase "Red Engine" project named "1+1+1." In the first-year phase, enterprise Party members are invited to teach students, lead enterprise visits, and familiarize them with industry conditions, instilling professional ethics. During the second-year phase, students participate in enterprise internships, learning about corporate culture, practicing job skills, and engaging in work-related research. In the third-year phase, classes transition to the enterprise, with courses co-taught by enterprise mentors and college teachers, emphasizing craftsmanship such as pragmatism, innovation, and excellence. Additionally, students are trained to possess qualities such as diligence, perseverance, and a pursuit of excellence, while fostering a commitment to social responsibility and establishing a proper view of employment.

Integrating Party Building with Employment Guidance: Enhancing Precision Service Mechanisms

The College uses Party building as a key component in education and incorporates employment guidance into its approach, transforming the vitality of Party organizations into strong momentum for employment guidance work. It fully utilizes Party branch meetings, small group discussions, organization activities, and all aspects of Party member development and education to combine Party building with employment guidance. A three-level mentoring system is established involving ideological mentors, enterprise mentors, and professional mentors to strengthen employment guidance, help students adjust their career expectations, and find the right career path. Additionally, targeted job information is provided, graduation internships are scientifically arranged, and support is given for graduates to obtain occupational skill certificates, thereby enhancing their professional skills for employment.

"Three Stages, Four Commonalities, Five Sequences" Talent Training Model

The School of Economics and Management at Zhejiang Business College, following the requirements of the "school-enterprise cooperation and work-study combination" talent training model, has established a professional advisory committee composed of government departments, industry associations, and corporate experts to participate in the entire talent training process. Joint school-enterprise training is the main model for cultivating talent in higher vocational education, and the College has cooperated with over 50 enterprises to form in-depth "2+1" order-based teaching classes. The focus remains on serving students in order-based classes, choosing enterprises that value the training of reserve talent, recognize the effectiveness of school-enterprise cooperation, have industry influence, are developing quickly, and have well-established training systems.

In the six-month industry-education integration period, students first undergo a 1-2 week corporate management trainee induction training course, including company culture and professional courses. Then, through job rotation across various departments, students undertake internships, typically learning the basic operational process of a different project every three days under the guidance of mentors. During this phase, students gain a preliminary understanding of department operations and acquire one or two basic operational skills, such as cashiering or stocking. Additionally, they explore their own interests, laying a foundation for future employment.

Once students determine their interests, training mentors and the operations department head decide on practical projects and training schedules. On this basis, students join the work schedule alongside employees, combining job participation with focused learning of the established training topics. After completing 1,000 hours of internship and part-time work at Mingkanghui Enterprises, students are given priority for retention as corporate management trainees and, after assessment, prioritized for the company's "Elite Training Program," providing opportunities for rapid advancement after graduation. During this time, students gradually understand and integrate into the enterprise, developing basic behavioral norms and preparing for future roles in management.

"Three-Stage" Vocational "Sandwich" Talent Training Model

The College began its collaboration with Mingkanghui in 2021, signing an industry-education integration talent training cooperation framework agreement to jointly implement the teaching plan established through school-enterprise cooperation. The plan involves a three-stage (fundamental theory, professional skills, and on-the-job internship) training framework and a dual mentorship system, creating a "sandwich" talent training model that integrates theoretical study with practical internships. This model emphasizes the combination of theory and practice, helping students deepen their understanding of theoretical knowledge through hands-on experience, and better aligning them with the job market's actual requirements.

"Four Commonalities" Industry-Education Integration Modern Talent Training Plan

Over three years, the training focuses on an enterprise-style approach and a professional cultivation process, establishing a "Four Commonalities" school-enterprise integration model: shared resources, jointly developed courses, co-education of teachers, and jointly managed

processes. This approach moves beyond fragmented "school-enterprise cooperation" to a comprehensive, whole-process "industry-education integration." Enterprises and the College collaborate to cultivate compound, high-quality technical talent that meets industry needs. During the students' time at school, the "dual-teacher" model is implemented, involving both school and enterprise instructors, while during internships, a "dual-mentor" approach is used. The entire faculty is involved in training students, deeply integrating school and enterprise resources.

The training is divided into three distinct stages over three years: the first year focuses on comprehensive theoretical education led by the College, fostering general capabilities; the second year involves both school and enterprise training to build core professional skills and guide future career choices; the third year involves on-the-job internships facilitated by cooperating enterprises, following enterprise-based job skills training courses throughout.

"Five Sequences" Industry-Education Integration Training Practice

The entire talent training plan also embeds courses on business model innovation and integrates cutting-edge corporate knowledge into teaching. Related courses are developed jointly, combining enterprise presentations and training into a "Five Sequences" curriculum training system, creating a progressive training structure under the "Zhejiang Business College Mingkanghui Management Trainee - Extraordinary Plan" order-based program. For example, the functional sequence includes courses such as team management for new employees; the technical sequence integrates assessments for vocational skill certification in collaboration with the School of Economics and Management; the sales sequence involves training for new sales recruits and elite sales personnel; the operational sequence starts with preparing for future store management roles and trains reserve managers; and the production sequence involves training staff from entry-level production to general management, deepening their career development within the company.

The College adheres to the principle of student voluntariness, creating a three-step mutual selection process (as shown in Table 1) that ultimately leads to labor contract signing, achieving in-depth industry-education integration and ensuring high-quality initial employment for graduates.

NO.	CONTENT DESCRIPTION	RESPONSIBLE PERSON
1	Cooperation Agreement Signing	Government Department, Industry Association, Cooperative Enterprise
2	Teacher Team Formation, Curriculum Planning	College, Cooperative Enterprise
3	Implementation of Teaching Plan, Course Arrangement	College, Cooperative Enterprise
4	Student Selection and Grouping (First Selection)	College, Cooperative Enterprise
5	Internship Agreement Signing, Internship Safety Education	College, Cooperative Enterprise
6	Establishing Practice Bases for Student Training	College, Cooperative Enterprise

NO.	CONTENT DESCRIPTION	RESPONSIBLE PERSON
7	Organizing Company Visits and Lectures to Understand the Business Environment	Cooperative Enterprise
8	Implementation of Enterprise Mentorship System	Cooperative Enterprise
9	Student Internship and Participation in Company Business; Conducting On-site Learning	College, Cooperative Enterprise
10	Mentorship Evaluation, Student Performance Assessment	College, Cooperative Enterprise
11	Implementation of Internship Course Content	Cooperative Enterprise, College, Internship Enterprise
12	Training Safety Agreement Signing, Internship Launch	College, Internship Enterprise
13	Phase 2: Internship Arrangement, On-Site Activities	Cooperative Enterprise, Internship Enterprise
14	Stage 3: On-Site Participation in Production and Management	Cooperative Enterprise, Internship Enterprise
15	Establishing Mentor and Supervisor System for Student Employment Guidance	College, Internship Enterprise
16	Final Presentation of Achievements, Student-Employer Agreement Signing	College, Internship Enterprise
17	Graduation, Student Final Selection, Employment Contract Signing	Cooperative Enterprise, Internship Enterprise

Table 1 Description of each stage of industry-education integration in the School of Economics and Management

During the fifth semester, an order-based class is formed where students participate in industry-education integration at the enterprise. The College, in alignment with the company's talent development philosophy and management courses, designed three courses: "Corporate Culture," "Team Building," and "Emergency Response for Unexpected Incidents." The company evaluates students' performance in these courses, while the College provides lectures on "Advanced Professional Knowledge" delivered directly at the enterprise. Additionally, the company has established two distinct career development paths for students in the order-based class, providing management trainees with clear advancement options—either through market competition or practical experience in chain store operations, to meet different career development needs.

The College also places great importance on the arrangement of the teaching process for industry-education integration. Before students enter the enterprise, the College assigns specialized internal guidance teachers to assist in managing the students alongside the company. These teachers also conduct on-site inspections regarding student accommodation and work conditions, address potential safety concerns, and coordinate with the enterprise in managing student affairs. A "School of Economics and Management Corporate Teacher Mobile Workstation" has been established at

Mingkanghui, allowing guidance teachers to deepen their understanding of student cultivation pathways within the company, providing full-cycle, tracking-based guidance according to the company's training model and schedule.

Features and Highlights

Comprehensive Integration in the Training Process, Deep Sharing of School-Enterprise Resources

Based on the cooperation agreement, the school and enterprise have successively formulated joint enrollment methods for talent cultivation, enterprise-style student management methods, "dual mentor" management methods, teaching quality management methods, and other related policies. These also include a series of procedures such as management trainee development processes, salary systems for management trainees, and job evaluation and promotion management methods. The enterprise is fully involved in talent cultivation and curriculum system development, which includes general education courses, foundational professional courses, vocational skills courses, and industry-education integration content. Additionally, students participate in project-based teaching and specialized training courses through school-based retail clubs such as the "Smart Retail Club" and the "Small and Beautiful Chain Store Club," organizing real-life training activities in an on-campus training supermarket, conducting retail case studies, and participating in skills competitions. These activities are aimed at helping students gain in-depth understanding of the industry, learn professional knowledge, and develop their professional skills.

Seamless Integration of Training Objectives, Supporting Smooth Transition of Student Roles

Building on the deepening of professional classroom teaching, the College and Mingkanghui Ecological Agriculture Group launched the "Thousand Hours Plan," breaking down time and space barriers by extending the classroom into the second classroom. Students are encouraged to participate in social practice with enterprises from their freshman year, gaining work experience and hourly pay during part-time roles. Since the industry-education integration collaboration began in 2021, the retention of relevant interns and the career advancement of students has been significant, with increased professional knowledge and skill development through practical training that combines teaching with real-world application. Students have shown significant improvement in organizational communication abilities during the practical internship scenarios.

After completing these two phases of training and internships, students who persist and meet the standards have typically achieved the competence and level equivalent to a store manager. The training plan, which gradually progresses from simple to complex, has proven to align well with the learning characteristics of vocational students and the growth trajectory of talent in chain supermarkets, demonstrating its feasibility and effectiveness.

Additionally, part-time work in school-enterprise cooperative enterprises can count towards 200 hours of annual social practice and provide 0.5 credits for the semester's social investigation and practice course. This practice has also served as a prototype for the collaborative project titled "Party Building Leads School-Enterprise Cooperation for a New Model, Synergistic Talent Development Promotes Industry-Education Integration," which explores a new model of school-

enterprise cooperation. Based on this, logistics and retail talent development systems have been established for Mingkanghui.

Highly Integrated Faculty Development, Joint School-Enterprise "Dual Mentor" Team Building

Mingkanghui Ecological Agriculture Group is used as a practical training base for "dual mentor" faculty development. The enterprise and the College jointly establish an industry-education integration teacher training platform, aggregating training resources from both the school and the enterprise. Centered on practical projects, adhering to principles of usability and practicality, the school and enterprise jointly discuss faculty training plans, conduct joint assessments, and co-develop and enhance a dual-qualified faculty team with moral and technical competence. The industry-education integration teacher training platform includes aspects such as professional development, enterprise profiles, student success, teacher development center, and enterprise training management center.

Conclusion

The College has always taken political development as its guiding principle, focusing on enhancing organizational capacity and centering on professional development. It has fully implemented the "Party Building + Industry-Education Integration" demonstration initiative, adhering to the concept of "Party Building Leads, Discipline Empowers, Government-School-Enterprise-Society Synergy" in the exploration of industry-education integration. Through the leadership of Party building, the College has advanced the construction of standardized, digitized, branded, ecological, and demonstrative "Five-Factor" approaches to industry-education integration.

Since the start of school-enterprise cooperation, the College has strengthened top-level design, establishing a comprehensive industry-education integration mechanism. This has deepened integration among government, schools, industries, enterprises, and communities, actively exploring new developments and pathways, while building a complete talent selection and recruitment mechanism. By combining Party building with employment guidance, the College targets the needs for technical, marketing, and other professional talents, cultivating comprehensive management talent based on enterprise needs. Under the reform and innovation of the "One Integration, Dual Promotion, Three Stages, Four Commonalities, Five Sequences" industry-education integration mechanism, the College has effectively developed student training plans and cultivation methods.

Furthermore, the College has deepened school-enterprise cooperation and integrated work-study, combining practical training with teaching, bringing talent development into the campus by advancing course content and internships to better meet the speed of enterprise development. Dual stakeholders—the school and the enterprise—jointly explore and practice the cultivation of professional talents, deeply integrating technology, faculty, culture, and human resources. Through an enterprise-style training model and professional training process, the College comprehensively participates in the design, implementation, and evaluation of talent cultivation plans, realizing integrated talent cultivation between the school and enterprise.

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Relationship between physical activity and mobile phone addiction in older adults: a follow-up study

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Abstract

Aim: To explore the longitudinal predictive relationship between physical activity and mobile phone addiction in older adults. **Methods:** Utilizing the Physical Activity Scale and Mobile Phone Addiction Scale for evaluation, a total of 859 participants from four Jiangxi Province's senior universities were surveyed, Guizhou Province, Hunan Province and Chongqing Municipality were selected as study subjects to carry out two follow-up surveys over a period of six months. **RESULTS:** (1) The results of repeated measures ANOVA showed that there was no significant difference between pre- and post-measurements of physical exercise and mobile phone addiction. (2) The results of correlation analyses showed that both the simultaneous correlation and the subsequent correlation between physical activity and mobile phone addiction were significant (T1: $r = -0.36$, $P < 0.001$; T2: $r = -0.25$, $P < 0.001$). (3) Cross-lagged regression analyses showed that after controlling for pretest interpersonal skills, pretest physical activity had a significant negative predictive effect on posttest mobile phone addiction ($\beta = -0.31$, $P < 0.001$); after controlling for pretest physical activity, pretest mobile phone addiction did not have a significant positive predictive effect on posttest physical activity ($\beta = 0.03$, $P < 0.001$). **CONCLUSION:** Both physical exercise and mobile phone addiction in older adults have some stability, there is an association between physical exercise and mobile phone addiction, physical exercise negatively predicts mobile phone addiction with significance, and mobile phone addiction does not predict physical exercise.



Full Text Article



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Keywords: older adults; physical activity; mobile phone addiction; cross-lagged analysis; follow-up study

Introduction

With the booming development of the information age, mobile phones, tablets and other intelligent mobile terminal devices have already replaced the traditional social media to form a new

social network, penetrating into society, life and many other aspects. Based on figures published by the China Internet Network Information Centre (CNNIC), as of June 2024, 99.8% of China's Internet users use mobile phones to access the Internet, and the proportion of Internet users aged 50 and above has increased from 32.5% in December 2023 to 33.3%, with the size of the group of Internet users aged 60 and above exceeding 157 million, and more and more elderly people are active on the Internet platform.(CNNIC: The 49th Statistical Report on the Development of the Internet in China 2022). According to the research report on the online behaviour of middle-aged and elderly people in 2021(Imedia Research | An Analysis of Online Engagement Patterns Among Middle-aged and Senior Populations in 2021- Internet Industry Research Report - IIMedia Report Center., n.d.). The study shows that the average daily online time of middle-aged and elderly Internet users has exceeded 4 hours, accounting for 51%, which exceeds the national average time of 3.72 hours. While the scale of elderly Internet users and the average time spent on the Internet have reached new heights, the problem of mobile phone addiction is not only intensifying among the young group, but is also gradually becoming prevalent among the elderly group. Mobile phone addiction refers to a pathological dependence and psychological need for individuals to use the Internet excessively, resulting in obvious impairment of occupational and social functions, leading to a loss of control over Internet use behaviour, and the interaction between individuals and modern information technology(Huang Wenying, et al., 2024). and is a negative result of the mutual interaction between individuals and modern information technology(Zhong Dan et al., 2023). It is a negative result of interaction between individuals and modern information technology. Studies have shown that people with smartphone addiction often exhibit uncontrolled behaviors.(Liu Yan et al., 2023). low self-esteem(Wu Yilin et al., 2024). low self-control(Liu et al., 2024). and craving for external dependence(Zeng Chengwei et al., 2024). and a desire for external dependence, are prone to difficulties in emotional regulation(Liu Qian et al., 2024). anxiety, depression, and sleep disorders(Pan Zhiyin et al., 2023). and other diseases. Current research in the field of mobile phone addiction is mostly focused on the youth group, and the focus has not yet been on the elderly, a group in urgent need of attention.(Jia Yu et al., 2023). The focus has not yet been on the elderly, a group in urgent need of attention.

Physical activity is considered to be one of the effective interventions to improve maladaptive behaviours due to its simplicity and cost-effectiveness. Physical activity refers to the physical activities that individuals do in order to improve their fitness, health, physical and mental development, and physical functioning.(Cathro et al., 2024). Physical Activity. Previous studies have shown that physical activity is associated with mobile phone addiction and has a significant negative predictive effect on mobile phone addiction.(Wong et al., 2024). Self-Determination Theory Self-determination theory suggests that(Deci & Ryan, 2008). Physical activity reduces the need for and dependence on external information affairs by satisfying the psychological needs of individuals in the areas of autonomy, competence, and relationships.(R. Zhang et al., 2024). found that mobile phone addiction has a negative impact on adolescent health, and that high levels of physical activity can alleviate the harms of mobile phone addiction by reducing negative emotions. A systematic review(Pirwani & Szabo, 2024). found that interventions using physical activity can enhance psychological needs and physical health, and is an effective measure for preventing undesirable behaviours. Intervention studies have found that at least 5 sessions of moderate-

intensity physical activity, 3 sessions of vigorous-intensity physical activity, or strength training at least 3 days per week are effective in improving adolescents' mobile phone addiction.(Wu & Chou, 2023; W. Zhang & Xu, 2022). that were effective in improving mobile phone addiction in adolescents. It was hypothesised that physical activity would negatively predict mobile phone addiction in older adults.

Mobile phone addiction and physical activity may not be a simple one-way relationship. Mobile phone addiction, as an undesirable psychological behaviour embodying the compulsive, dependent and impulsive characteristics of the individual, causing excessive focus on the mobile phone screen, increasing sedentary time and screen-front behaviours, and affecting physical activity activation(Ma et al., 2022) . Social substitution hypothesis(Derrick et al., 2009). It is believed that human beings are social animals, and individuals tend to seek social substitutes to comfort their hearts when they feel lonely, and the elderly in the retirement stage are affected by many factors and are a high incidence group of negative emotions such as loneliness, depression, and stress.(Huang Wenying et al., 2024). In addition, smartphones successfully meet the social needs of the elderly and relieve stress, anxiety and other negative emotions. However, the fun, entertainment and strong temptation of various APPs on mobile phones can easily lead the elderly to fall into the quagmire of mobile phone addiction, which reduces the motivation of individuals to participate in physical exercise and makes them lack of perception of physical exercise. Compared with participating in physical exercise, it is easier to use mobile phones to spend leisure time and feel spiritual happiness.(Liu Jie, 2021). The empirical studies have reached similar conclusions. Empirical studies have also reached similar conclusions, suggesting that mobile phone addiction reduces individuals' motivation for physical activity, and ultimately leads to motivation for physical activity(Demetrovics et al., 2022). and ultimately leads to a decrease in motivation for physical activity. Another viewpoint is that although mobile phone addiction triggers sedentary and sedentary problems, which have an impact on an individual's physical activity, this impact does not necessarily lead to significant changes in physical activity. There is no significant difference in physical activity between addicts and non-addicts(Dang et al., 2018). Considering the specificity of the elderly population, whether mobile phone addiction could be a hindrance to their physical activity is a question that deserves to be explored in depth. It is hypothesised that mobile phone addiction negatively predicts physical activity.

There is no conclusive evidence on whether there are gender differences in physical activity and mobile phone addiction. Regarding gender differences in physical activity, some scholars believe that there are gender differences in physical activity and that men are generally more active in physical activity than women(Huang Wenying et al., 2024). Some scholars believe that there are gender differences in physical activity and that men are generally more active than women. There are also studies that suggest that there are no significant gender differences among older adults, and that the proportion of female older adults participating in physical activity is increasing(Lin Zhengmei et al., 2018). The gender difference in mobile phone addiction is not significant in the elderly population. With regard to gender differences in mobile phone addiction, research results are also inconsistent, with one viewpoint suggesting that there is no gender difference in mobile phone addiction, with males being slightly more likely than females to be addicted to mobile phones(Bo Yang, 2022). Another viewpoint is that there are gender differences in mobile phone

addiction, and women are more likely to be addicted to using mobile phones online (Huang Weiwei, 2021). The other view is that there is a gender difference in mobile phone addiction and women are more likely to be addicted to using mobile phones online. Therefore, further research is needed to verify the existence or otherwise of gender differences in both physical exercise and mobile phone addiction and their specific manifestations, especially in the elderly group, where empirical research is even more lacking.

Whether physical activity and mobile phone addiction are unidirectional or bidirectional for the elderly group has not yet been determined. Throughout the previous studies, the research on physical activity and mobile phone addiction mainly focuses on the adolescent group, with less attention paid to the elderly group, and most of them are cross-sectional studies, and few scholars have conducted longitudinal studies. Therefore, in order to examine the relationship between physical activity and mobile phone addiction, the present study established a cross-lagged model to investigate the gender differences in mobile phone addiction, and conducted a 6-month longitudinal study divided into 2 phases of follow-up surveys in order to examine the interrelationships and predictive relationships between the two.

Objects and Methods

Objects

Using convenience sampling method, a survey was conducted between June and December 2023 on a total of 859 students from one senior university in each of Jiangxi Province, Guizhou Province, Hunan Province, and Chongqing Municipality. Inclusion criteria: (1) age ≥ 60 years; (2) attending the senior university for ≥ 6 months; (3) clear cognitive function and state of consciousness. Exclusion criteria: (1) presence of cognitive impairment or major mental illness; (2) hearing or speech impairment; (3) suffering from major diseases. The survey was entrusted to the alumni and the resources of the research group to contact the local senior university to conduct the questionnaire survey, and all the subjects gave informed consent and participated voluntarily. A total of 2 questionnaire surveys were conducted before and after, with an interval of 6 months. The 1st survey was conducted in June 2023, and 1,342 questionnaires were obtained, with 1,154 valid questionnaires and an effective rate of 85.9%; the 2nd survey was conducted in December 2023, and 1,006 questionnaires were obtained, with 895 valid questionnaires and an effective rate of 88.9%, and the specific information is shown in Table 1. In addition, after analysing and testing, the difference between the analysed sample and the attrition sample on the 2 variables was not significant ($p > 0.05$), indicating that the study was unstructured attrition. All subjects who participated in the research have been fully informed about the study and voluntarily participated in the research study.

Table 1
Demographic variables of physical activity and mobile phone addiction in older adults

variant	typology	quorum	per cent
distinguishing between the sexes	male	397	46.20%
	women	462	53.80%
household registration	countryside	260	30.30%
	municipalities	599	69.70%
	Primary and below	298	34.70%
academic qualifications	junior high school	366	42.60%
	High school or secondary school	106	12.30%
	College and above	89	10.40%
incomes	2000 and below	307	35.70%
	2001-3000	236	27.50%
	3001-4000	218	25.40%
	4000 and above	98	11.40%

Methodology

Physical Activity Scale Leung Tak-ching was selected as the choice for the(Liang Deqing, 1994). The revised physical activity scale. The scale is a unidimensional scale. A five-level Likert scale was used. The physical activity level of an individual is evaluated by accumulating the scores of the three indicators. The higher the score, the higher the amount of physical activity in which the individual participates. In this study, the Cronbach's alpha coefficients were 0.829 (T1), 0.883 (T2).

Mobile phone addiction scale The mobile phone addiction tendency scale compiled by Xiong Jie et al. was used and modified according to the study subjects and problems(Xiong Jie et al., 2012). The mobile phone addiction tendency scale compiled by Xiong Jie et al. was used and modified accordingly based on the research subjects and problems. The scale has 16 entries and contains four dimensions. A five-point Likert scale was used, with higher scores representing higher levels of problematic mobile phone use. The Cronbach's alpha coefficients were 0.876 (T1), 0.944 (T2).

Measurement process

Before starting the test, all classroom leaders or classroom teachers who participated in the survey were trained in order to guarantee the accuracy and consistency of the data. The Questionnaire Star platform was selected for data collection. The tests were all organised on a class-by-class basis to ensure the consistency of data sources. Meanwhile, to ensure the standardisation and accuracy of the tests, both tests were executed by the same main test person. During the testing process, the main test person clearly explained to the participants important information such as the purpose of the survey, the principle of voluntary participation, anonymity, confidentiality of data and storage methods. All subjects could voluntarily withdraw from the test at any time. Necessary assistance was provided throughout the process of completing the questionnaire to those who were unable to complete it on their own.

Data processing and analysis

SPSS 26.0 software was used for descriptive statistics, reliability and validity analysis, repeated measures ANOVA, and cross-lagged analysis of data.

Common method bias test

The Physical Activity Scale and the Subjective Exercise Experience Scale were assessed using the Harman one-way test. The results showed that there were two factors with eigenvalues greater than 1. Of these, the total variance explained by the first factor was 35.087% and 33.529%, respectively, both lower than the critical value (Zhou Hao, 2004). This indicates that there was no serious problem of common methodological bias in this study.

Results

Stability and gender differences in physical activity and mobile phone addiction

Physical activity and mobile phone addiction were used as dependent variables, time of testing (pre-test T_1 and post-test T_2) as a within-subjects variable, and gender as a between-subjects variable. Repeated measures ANOVA was performed. The results showed that the main effect of physical activity at test time was not significant, $F=0.03$, $p>0.05$; the main effect of gender was not significant, $F=0.04$, $p>0.05$; and the interaction between physical activity test time and gender was not significant, $F=0.23$, $p>0.05$. The main effect of mobile phone addiction at test time was not significant, $F=0.21$, $p>0.05$; the main effect of gender was not significant, $F=0.01$, $p>0.05$; the interaction between time of measurement of mobile phone addiction and gender was not significant, $F=0.03$, $p>0.05$.

Correlation analysis between pre- and post-test physical activity and mobile phone addiction

Measures of physical activity showed significant negative correlations with mobile phone addiction at different time points. Specifically, there was a significant correlation between the level of physical activity in the previous test and the level of mobile phone addiction in the next test, and vice versa, with the level of mobile phone addiction in the previous test showing a significant correlation with the level of physical activity in the next test. This suggests that physical activity

and mobile phone addiction are not only correlated at one point in time, but that their relationship is also stable across time, satisfying the conditions for conducting cross-lagged analyses. The results of the correlation analysis are presented in Table 2.

Table 2

Descriptive and correlational analyses of physical activity, mobile phone addiction in older adults (*r*, n=859)

variant	$\bar{x} \pm s$	T1 Physical exercise	T2 Physical exercise	T1 Mobile phone addiction
T1 Physical exercise	18.89±25.38			
T2 Physical exercise	19.00±28.50	.37***		
T1 Mobile phone addiction	2.88±0.80	-.36***	-.16***	
T2 Mobile phone addiction	2.90±0.81	-.48***	-.25***	.58***
F-value		0.19		0.15
p-value		0.667		0.696
η^2		<0.001		<0.001

Note: T1, 1st measurement; T2, follow-up measurement after 6 months, * P<0.001.**

Cross-lagged analysis of physical activity and mobile phone addiction in older adults

First, the predictive effect of physical activity on mobile phone addiction was examined. When T2 mobile phone addiction was used as the dependent variable, demographic variables were introduced into the regression model as control variables to control for the potential effect of demographic variables; then T1 mobile phone addiction and T1 physical activity were included in the regression equation as the second level of variables; the results showed that, after controlling for demographic variables and T1 mobile phone addiction, T1 physical activity could significantly negatively predict T2 mobile phone addiction ($\beta = -0.31$, $p < 0.001$). Next, the predictive effect of mobile phone addiction on physical activity was examined in the same way using T2 physical activity as the dependent variable. The results showed that T1 mobile phone addiction did not predict T2 physical activity after controlling for demographic variables and T1 physical activity ($\beta = 0.03$, $p > 0.05$). The details are shown in Figure 1.

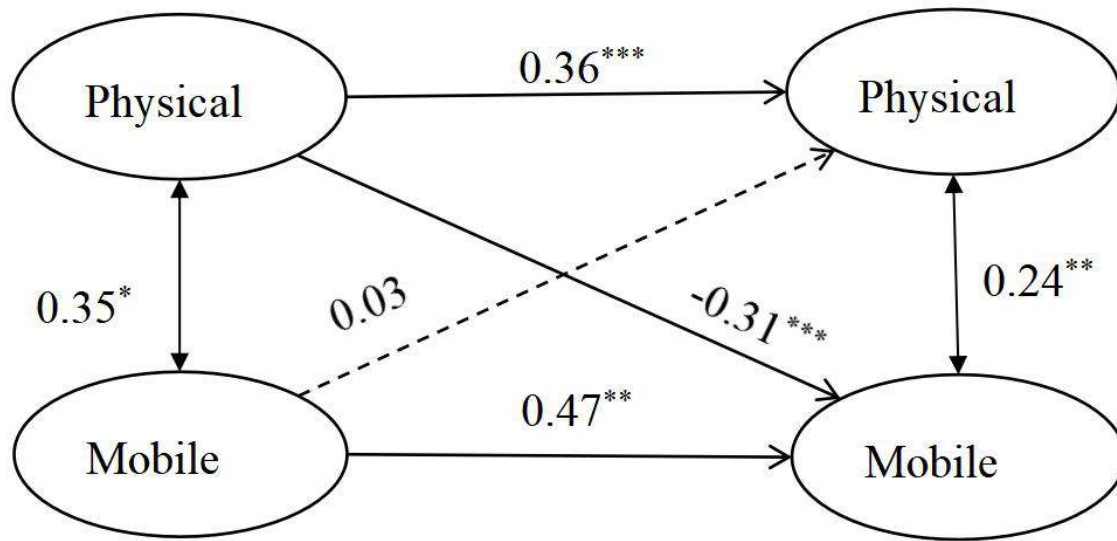


Figure 1

Cross-lagged analysis of physical activity and mobile phone addiction

Discussion

The results of the repeated measures ANOVA showed a degree of stability in physical activity among older adults, with no statistically significant difference between the 2 scores, a finding that is consistent with the results of previous studies(Bo Yang, 2022) . Intrinsic Theoretical Structure of Lifelong Physical Activity Habits(Shao Weide, 2003). It is believed that an individual's daily behaviour is characterised by temporal stability. Physical activity is often considered to be an activity that is influenced by individual preferences, motivation, and personality traits. Individuals tend to maintain a consistent pattern of behaviour, including the habit of adhering to physical activity in daily life, and the stability of this habit may stem from the individual's behavioural preferences and perceptions, as well as the perceived value of physical activity and the pursuit of physical health and mental pleasure. In addition, there is no gender difference in physical activity among older adults, which is consistent with the findings of Tao Baole(Tao Baole et al., 2023). and Chen Xiaoan et al.'s study, which is inconsistent and supports Zhang Xinhui's(Zhang Xinhui et al., 2022). 's point of view. The possible reason for this is the different sources of sample data. The sample data in this paper all came from the University of the Elderly, which is a field that provides a place for the elderly to continue their studies and social activities, and in this environment, it may promote the importance of physical and mental health and active participation in physical activity for the elderly(Chen Huijuan, 2021). and thus encourages men and women to be equally active in physical activity, reducing gender differences. In addition, compared to other social groups, older

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Chao, Y., Huang, W., Zhang, W., & Hu, C. (2024). The relationship between physical activity and mobile phone addiction in older adults a follow-up study. *Journal of Modern Social Sciences*, 1(2), 198–211.

people may be less affected by gender roles and social pressures as they age age age(Cai Zhenghua, 2023) . Increasing age and changes in the lives of older people may also make them less subject to social expectations and pressures, leading them to show greater freedom and flexibility in physical activity, indicating gender convergence. In summary, physical activity among older adults remains relatively stable over time.

Repeated measures ANOVA results showed a degree of stability in mobile phone addiction among older adults, with no statistically significant differences between the 2 scores. This finding is consistent with previous research(Bo Yang, 2022) . Rational addiction theory proposes(Rogeberg, 2020). that individuals weigh the long-term effects, immediate benefits, and risks of addictive behaviours holistically. Based on this theory, it can be inferred that individuals will decide the frequency and intensity of their mobile phone use based on the assessment of benefits and risks. Given the multifunctionality of mobile phones, it has a relatively stable rewarding value for users, and therefore, individual mobile phone use behaviours show a certain degree of stability. In addition, mobile phone addiction is regarded as a type of behavioural addiction, and addictive behaviours usually originate from long-established habits, and since a habit is an ingrained behavioural pattern, an individual's mobile phone addictive behaviours may similarly exhibit a certain degree of stability. Therefore, mobile phone addictive behaviours may be influenced by a combination of an individual's assessment of risk and reward as well as the power of habit to exhibit a certain degree of stability. In addition, this study found that the gender main effect of mobile phone addiction in older adults was not significant, which is consistent with the results of previous studies(Huang Wenying, et al., 2024), which is consistent with the findings of Tong Yuantian(Tong Yuantian et al., 2019). et al.'s findings. According to the technology acceptance model(Zhang Pei, 2017). individuals' willingness to adopt new technologies depends largely on the impact of their perceptions of the usefulness and convenience of the technology. Gender is not an important determinant of mobile phone addiction; for the elderly, mobile phones serve to relieve their loneliness and isolation. It goes without saying that older people usually have a higher interest in new things, making them more likely to be at high risk for mobile phone dependence. Although factors such as an individual's personality traits can also have an impact, it is a smaller one. With the advancement of technology and the prevalence of smartphones, older people's acceptance of mobile phones has gradually increased, and their exposure to and use of mobile phones has increased, making them likely to be more likely to become dependent on mobile phones. And in the context of this general acceptance and use of mobile phones, gender differences become less pronounced in terms of mobile phone addiction. In addition, older adults may tend to live similar lifestyles as they age. For example, retirement provides older adults with more free time, while their social circles may gradually shrink. These lifestyle changes may result in older adults showing similar behavioural patterns in mobile phone use. In summary, older adults' propensity for mobile phone addiction will remain relatively stable over time.

The results of cross-lagged regression analysis found that physical activity had a significant negative predictive effect on mobile phone addiction, indicating that physical activity in the pre-test predicted mobile phone addiction in the post-test, which is consistent with the health behaviour theory(Klusmann et al., 2021) The health behaviours of individuals influence each other to a certain extent. Physical activity, as a positive health behaviour, may motivate older adults to pay more

attention to physical health and reduce mobile phone addiction. It also validates the applicability of the De la Grandville hypothesis hypothesis in the field of physical activity(Chen Xiaoling, 2013). According to the de la Grandville hypothesis hypothesis, individual engagement in exercise in specific activities reduces the number of hours spent on other activities, and as older adults increase their engagement in physical activity, they may reduce the amount of time spent on their mobile phones and the frequency of their use. Physical activity is often accompanied by an element of social interaction, which provides older adults with the opportunity to interact with others, and this social interaction can help to reduce their dependence and need for mobile phone use, thereby reducing the likelihood of mobile phone addiction. Physical activity as part of an active lifestyle Older adults may be more concerned with physical fitness and active living when engaging in physical activity. They are more inclined to invest time in exercise and less time in mobile phone addiction to maintain good health and vitality. Good health behaviours, especially moderate physical activity, have significant positive effects on alleviating mobile phone addiction among older adults, and appropriate physical activity not only helps to alleviate negative emotions, but is also a key method to correct an individual's addictive behaviour. According to the theory of network use and satisfaction(Lu Heng, 2011) , the individual's psychological needs such as social and entertainment are satisfied in the process of using the network, and this satisfaction may increase the frequency of the individual's use of network devices such as mobile phones. This increases the risk of mobile phone addiction. In contrast, physical activity not only helps to reduce individuals' negative emotions, but also satisfies their psychological needs. Participation in physical activity not only reduces the frequency of individuals using smartphones, but also has a positive effect on alleviating mobile phone addiction by increasing the efficiency of dopamine transmission in the brain. By satisfying psychological needs, reducing negative emotions, and enhancing the body's dopaminergic signalling capacity, physical activity provides an effective way to improve an individual's addiction. In view of this, it is recommended that the elderly actively participate in community-organised sports activities to expand their social circle through exercise, which is not only beneficial to their physical and mental health, but also helps them to better integrate into society and enjoy a happy old age.

This study explored the quasi-causal relationship between physical activity and mobile phone addiction among older adults through a longitudinal follow-up survey and the construction of a cross-lagged model to provide empirical evidence and support for the prevention and intervention of mobile phone addiction. However, there are still some limitations: first, the sample is not representative enough. Only some members of the University of the Elderly were selected. In order to improve the external validity of the study and to further deepen the understanding of the phenomenon of mobile phone addiction among the elderly, future studies should expand the coverage of the sample to include different regions, different types of elderly groups, and diversified contextual characteristics, so as to explore and analyse more comprehensively the influencing factors and potential intervention strategies of mobile phone addiction. Secondly, as the time and frequency of the surveys were limited, future studies could explore the link between physical activity and mobile phone addiction more comprehensively by extending the duration of the follow-up surveys and increasing the frequency of the surveys, so that changes in these variables over time can be observed more precisely.

Conclusion

Physical activity and cell phone addiction are both stable in older adults, there is an association between physical activity and cell phone addiction, physical activity negatively predicts cell phone addiction with significance, and cell phone addiction does not predict physical activity.

Acknowledgment

All contributions of the third parties can be acknowledged in this section.

Conflict of Interest

The authors declare no conflict of interest.

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A visual analysis of the last two decades of evaluation research in physical education teaching

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Abstract

The objective of this study is to examine the evolution of research in the field of physical education teaching evaluation in China over the past two decades, with a view to providing a basis for future research in this area. The methodology employed in this study is as follows: The Citespace visual analysis tool was employed to analyse 178 research documents related to physical education evaluation in China over the past two decades (2004-2024) in the China Knowledge Network (CNKI) database. The annual publication volume, research authors, issuing institutions, keywords and other relevant data were analysed visually. The results of the analysis indicate that the annual publication volume in the field of physical education teaching evaluation in China has exhibited an overall declining trend over the past two decades. The author with the highest number of publications is Yu Sumei, with three, while the institution with the highest number of publications is the School of Sports Science of Nanjing Normal University, with six. The research hotspots primarily concentrate on the evaluation object and evaluation content. The primary areas of future research are projected to be physical education ideology, learning interest, and practical teaching. Conclusion: The field of physical education teaching evaluation has received extensive and continuous attention. An analysis of its research status, hotspots, and trends can provide references and lessons for the development of future related research as well as the reform and development of this field.



Full Text Article



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Keywords: Physical education teaching evaluation; Citespace; Visual analysis; Knowledge graph

Introduction

The importance of school sports work is long-standing and widely acknowledged by the state. Significant progress has been made in terms of policy, historical background and current situation. However, new challenges and potential for further improvement have also emerged. On 15 October 2020, the General Office of the CPC Central Committee and the The General Office of the State

Council has published the Opinions on Comprehensive Strengthening and Improvement of School Sports in the New Era, which emphasises the indispensable and fundamental role of school sports in fulfilling the fundamental task of cultivating morality and education, as well as in improving the comprehensive quality of students. The Opinions emphasise that school sports play an indispensable and fundamental role in achieving the fundamental task of cultivating morality and enhancing the comprehensive quality of students. They put forward specific measures in terms of general requirements, main objectives, teaching reform, improvement of school conditions, improvement of evaluation mechanisms and organisational safeguards, among others (Xinhua News Agency, 2020). The opinion sets forth general requirements, principal objectives, pedagogical reform, enhancements to school administration, improvements to evaluation mechanisms, and organizational safeguards. In the context of physical education instruction in schools, the evaluation of physical education plays a pivotal role, facilitating the enhancement of teaching quality and the attainment of teaching objectives (Li Yan, 2007).

Physical education teaching evaluation can be defined as the objective and scientific assessment of the process and outcome of physical education teaching, encompassing the evaluation of teachers and students (Deng YaoKai, 2011). Prior research has demonstrated that the domain of physical education teaching evaluation has evolved from its nascent conceptualisation and classification (Li YanJun, 2009) to the development of an evaluation system (Fang Qiang, 2010; Shao Guoping & Wu Jialing, 2008; Yang Yufei & Duan Hongan, 2014) and the selection of an optimal trajectory (Tu Jinlong & Li Aiju, 2022; Zhang Wencai & Sun Zhanfeng, 2019). The level of research has gradually become more sophisticated. The current research emphasises the diversity of evaluation methods (Wang Zhanlong, 2008) and the individualisation of evaluation content. Furthermore, it highlights the importance of lifelong physical education (Yu Sumei, 2018) and the importance of lifelong physical education (Zhou Aidong, 2003). The current research emphasises the diversification of evaluation methods, the personalisation of evaluation contents, and the importance of lifelong physical education (Wang Ke, 2014) and other research.

As China's education system undergoes further reform, the significance of quality education is becoming increasingly apparent. The concepts of "health first" and "lifelong sports" are gaining traction in the public consciousness. However, alongside this reform, the shortcomings of traditional physical education teaching evaluation are becoming more evident. Consequently, the study of physical education teaching evaluation has emerged as a pivotal concern within the field of physical education.

In light of the aforementioned considerations, this paper employs the Citespace visual analysis tool to collate and enumerate the literature data pertaining to the evaluation of physical education teaching in China over the past two decades (2004-2024). The data has been retrieved from the China Knowledge Network (CNKI) database and subjected to in-depth exploration and analysis, with a particular focus on the annual publication volume and scientific research cooperation. The objective is to conduct a comprehensive and systematic exploration of the research status, focal points and development trends in the field of physical education teaching evaluation in China over the past two decades. This will facilitate the identification of the challenges and issues currently facing the field, while also providing a foundation for future research endeavours.

Information and methodology

Data sources

In this study, the China Knowledge Network (CNKI) was employed as the principal search platform for the research data. The advanced search function of the CNKI platform was utilized to search for the term "evaluation of physical education teaching" through the subject search, with the search condition of "precise." The search period was from 6 July 2004 to 6 July 2024 (search date: 19 August 2024), and 1,422 research documents related to the evaluation of physical education were initially retrieved. The search period was from 6 July 2004 to 6 July 2024 (search date: 19 August 2024), and 1,422 items of research literature related to the evaluation of physical education teaching were initially retrieved. Following the refinement of the Peking University Core and CSSCI databases, as well as a meticulous manual screening process to remove invalid literature such as conference papers, newspaper articles, books, and so forth, we were able to obtain 178 pieces of valid literature that met the research criteria, which constituted the basic sample base for the data analysis of the study.

Research methodology

The Citespace software, version 6.3.R1 (64-bit), was employed for the processing of the research data. The 178 valid documents retrieved from the China Knowledge Network (CNKI) were exported in Reforks format and renamed in download_x.txt format. The time slicing was set to 2004-2024, with a year per slice, and the parameter threshold $k=25$. The node types were selected as author, institution and keyword. All parameters were set to draw the corresponding maps. The time period covered by the analysis was set to 2004-2024, with a time slice of one year and a parameter threshold of $k=25$. Node types were selected as author, institution, and keyword. All parameters were set, and the corresponding knowledge maps were drawn to provide a visual representation and facilitate analysis of the research literature on the evaluation of physical education teaching in China over the past two decades.

Results

Analysis of the annual volume of publications

The number of annual publications serves as a principal indicator of the significance of a specific research domain. It not only reflects the velocity of advancement and the intensity of research activity within the realms of physical education and teaching evaluation, but also mirrors the prevailing trajectory of the field (Wang Haiyun et al., 2024). Furthermore, it can serve as an indicator of the overall trend within the field.

Figure 1 illustrates the annual publications from 2004 to 2024. It demonstrates a notable decline in the overall trend of publications in the field of physical education teaching evaluation research in China over the past two decades. During this period, the average number of publications was 8.9 per year, with 2007 representing the peak of publications (19). A notable surge was observed in the

period between 2004 and 2005, which can be attributed to the fact that the search commenced on 6 July 2004, and therefore, literature published prior to that date was not included in the search.

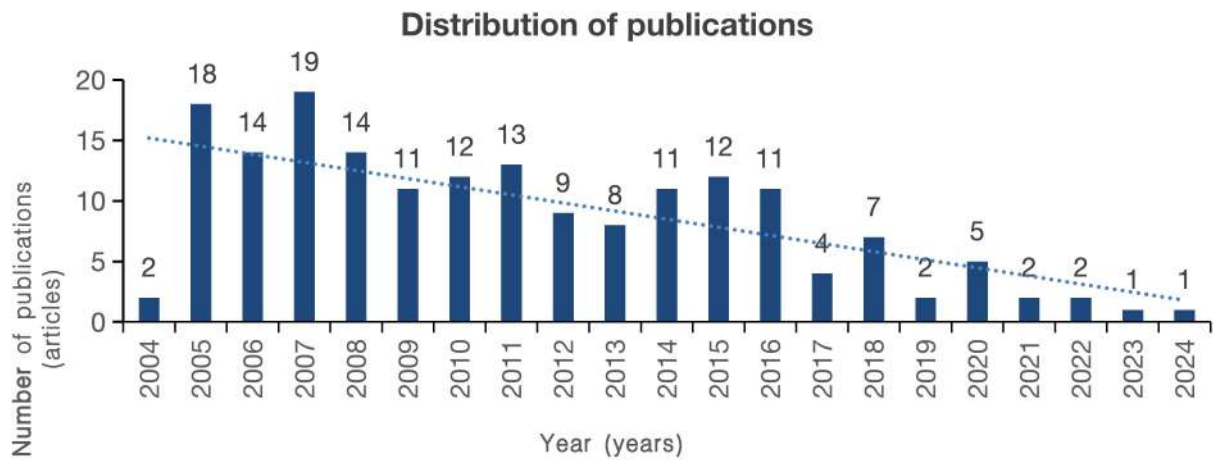


Fig. 1 Trend of annual publication volume of physical education teaching evaluation in China in the past 20 years

Analysis of research co-operation networks

Analysis of study authors

The authors of scientific literature are the subjects of scientific research activities, and the most prominent researchers in the field of physical education and teaching evaluation frequently spearhead the advancement of the field of research (Sun Haisheng, 2012). The node types were set to "Author", and the remaining parameters were left unchanged. The node types were set to "Author", and the remaining parameters were left unchanged, and a network map of research authors was created (Figure 2). This map comprises the top 12 authors in terms of the number of articles published (Table 1), with Yu Sumei having published the highest number of articles (3).

In author co-occurrence mapping, nodes serve as a crucial indicator. The number of nodes represents the number of research authors, the colour of nodes denotes the year of publication, and the connecting lines reflect the extent of collaboration between research authors. As can be observed from the mapping, there are 258 nodes, indicating that a total of 258 authors are involved in research in the field of physical education teaching evaluation. There are 140 instances of connectivity between nodes. A total of 140 instances of collaboration between authors are observed, with a network density of 0.0042. This indicates that, despite the large number of research authors, they are distributed in a relatively discrete manner, forming a small core group of authors with low levels of interconnectivity. Additionally, a considerable number of authors have published articles independently, contributing to the overall fragmentation of the network.

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Fig. 2 Knowledge map of the authors of our physical education teaching evaluation studies in the last 20 years

Table 1 The top 12 authors in terms of the number of articles published on physical education teaching evaluation in the past 20 years in China

arrange in order	author's name	volume of publications
1	Su Mei Yu	3
2	Sun Youping	2
3	Jin Hongzhen	2
4	Yao Lei	2
5	Huang Baohong	2
6	Liu Yang	2
7	Wang Fang	2
8	Zhao Li	2

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9	Wei Deng Yun	2
10	Hu Yihai	2
11	Zhang Peng	2
12	Yu Xiaodong	1

Analysis of issuing bodies

The advancement of scientific research is contingent upon the backing of research institutions. A visual analysis of these institutions not only permits an understanding of the scientific strength of each in the domain of physical education teaching and learning evaluation, but also facilitates the examination of the core driving force behind the development of the field of physical education teaching and learning evaluation (Zhang Fan, 2023). The following is a list of the research organisations. The node types were set to "Institution," with all other parameters remaining unchanged, and the resulting network map of research institutions is presented in Figure 3. The map presents a summary of the top 10 research institutions in terms of the number of articles published, as outlined in Table 2. The School of Sports Science at Nanjing Normal University has the highest number of articles, with six publications.

As illustrated in the network mapping of research institutions, 195 nodes indicate that there are 195 research institutions engaged in the field of physical education teaching evaluation. The research institutions are primarily distributed in teacher training colleges, sports colleges, and universities. However, there are only 41 instances of connectivity between nodes, and the density of cooperation (Density) is 0.0022, indicating that the cooperation relationship between institutions is not particularly close and that most of the institutions are primarily focused on their own research. There is a paucity of communication and collaboration between the institutions.

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 Network: N=193, C=41, Q=0.9732
 Nodes Labeled: 193
 Pruning: None
 Excluded: None



Fig. 3 Knowledge mapping of research institutes of physical education teaching evaluation in China in the past 20 years

Table 2 The top 10 research institutions in China in terms of the number of articles published on physical education teaching evaluation in the past 20 years

arrange in order	volume of publications	issuing body
1	6	College of Sports Science, Nanjing Normal University
2	3	School of Physical Education and Health, East China Normal University
3	3	Wuhan Sports Institute
4	2	Jiangxi Normal University School of Physical Education
5	2	Tarim University Athletic Department
6	2	College of Physical Education, Anhui Normal University
7	2	Beijing Sports University
8	2	Shenyang University School of Physical Education and Sport
9	2	College of Physical Education and Sport, Hunan Normal

<https://doi.org/10.5281/zenodo.14541408>

Zhou, C., Huang, W., Hu, C., & Zhang, W. (2024). A visual analysis of the last two decades of evaluation research in physical education teaching. *Journal of Modern Social Sciences*, 1(2), 212–230.

		University
10	2	School of Physical Education and Health, Hangzhou Normal University

Keyword analysis

Keyword co-occurrence analysis

Keywords represent the condensation and distillation of the core content of the research literature. The term 'co-occurrence' is used to describe the simultaneous appearance of specific keywords or key phrases within a given body of literature. By analysing the co-occurrence of these keywords, it is possible to gain insight into the primary focus of research within a particular field, as demonstrated by Wu Yonghua and colleagues (2024) in the context of physical education teaching evaluation. The analysis of keyword co-occurrence can be employed to gain insight into the research focus within the field of physical education evaluation. The Citespace software was used to set the node types to keyword, the K value to 25, and the Pathfinder (pathfinding network algorithm) and integrated network to draw the keyword co-occurrence mapping (Figure 4). In a keyword co-occurrence network mapping, a circle represents a keyword node, the size of which reflects the influence of the keyword in question. A line between two nodes indicates the number of times the two keywords appear together (Wang Xiwei et al., 2019). A total of 211 keyword nodes are represented in the mapping, with 354 lines connecting them. This is significantly higher than the number of nodes, indicating a high degree of interconnectivity between the keywords.

The data parameters obtained from the Citespace visual analysis were used to identify the keywords and centrality of the top 12 frequency rankings, which were then counted and plotted in a table (Table 3). The keyword centrality index is a measure of the prominence of a node in a network, with higher centrality values indicating greater influence. With the exception of the keywords 'sports' (0.06) and 'general colleges and universities' (0.01), the remaining ten high-frequency keywords all have a centrality value greater than 0.1. The top three in terms of centrality are 'teaching evaluation' (0.84), 'physical education teaching' (0.48), and 'colleges and universities' (0.40), indicating that they are situated at the core of the keyword co-occurrence network and possess a high degree of importance.

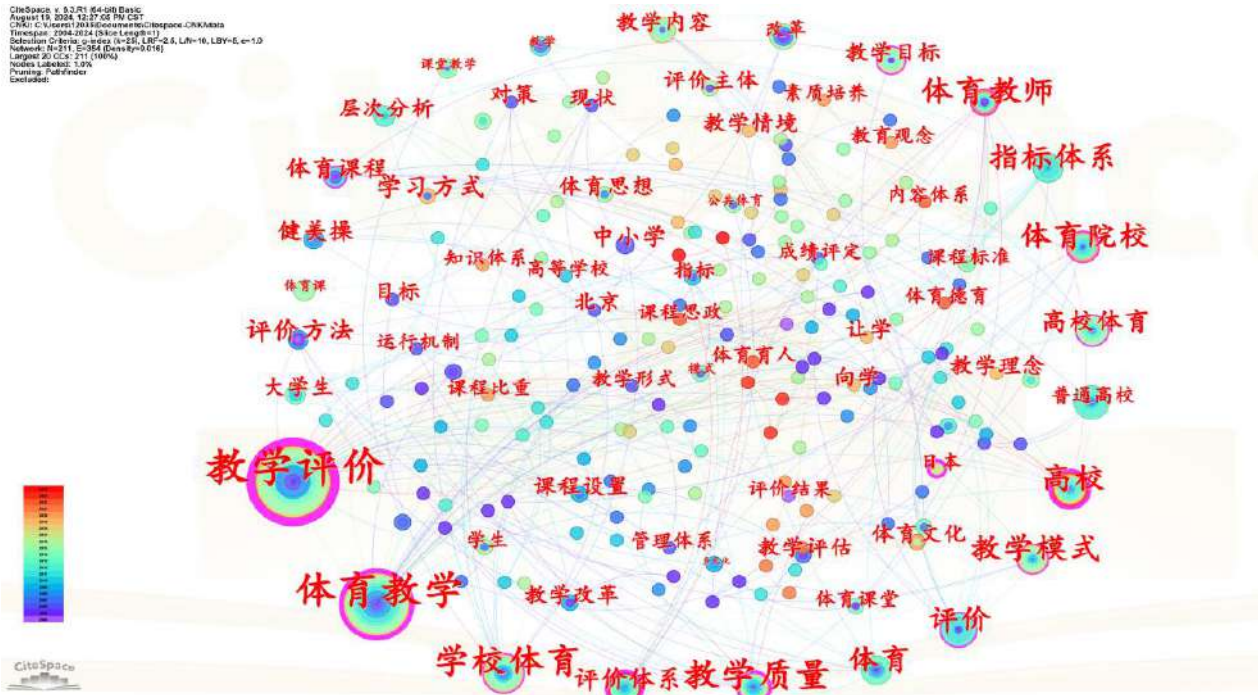


Fig. 4 Co-occurrence mapping of keywords in physical education teaching evaluation research in China in the past 20 years

Table 3 The top 12 keywords and centrality of the frequency of physical education teaching evaluation in China in the past 20 years

arrange in order	frequency	byword	centrality value
1	39	Evaluation of teaching and learning	0.84
2	32	Physical Education	0.48
3	11	school sports	0.20
4	9	rating system	0.23
5	8	Quality of Teaching and Learning	0.34
6	8	physical education	0.06
7	8	evaluations	0.14
8	8	educational model	0.13

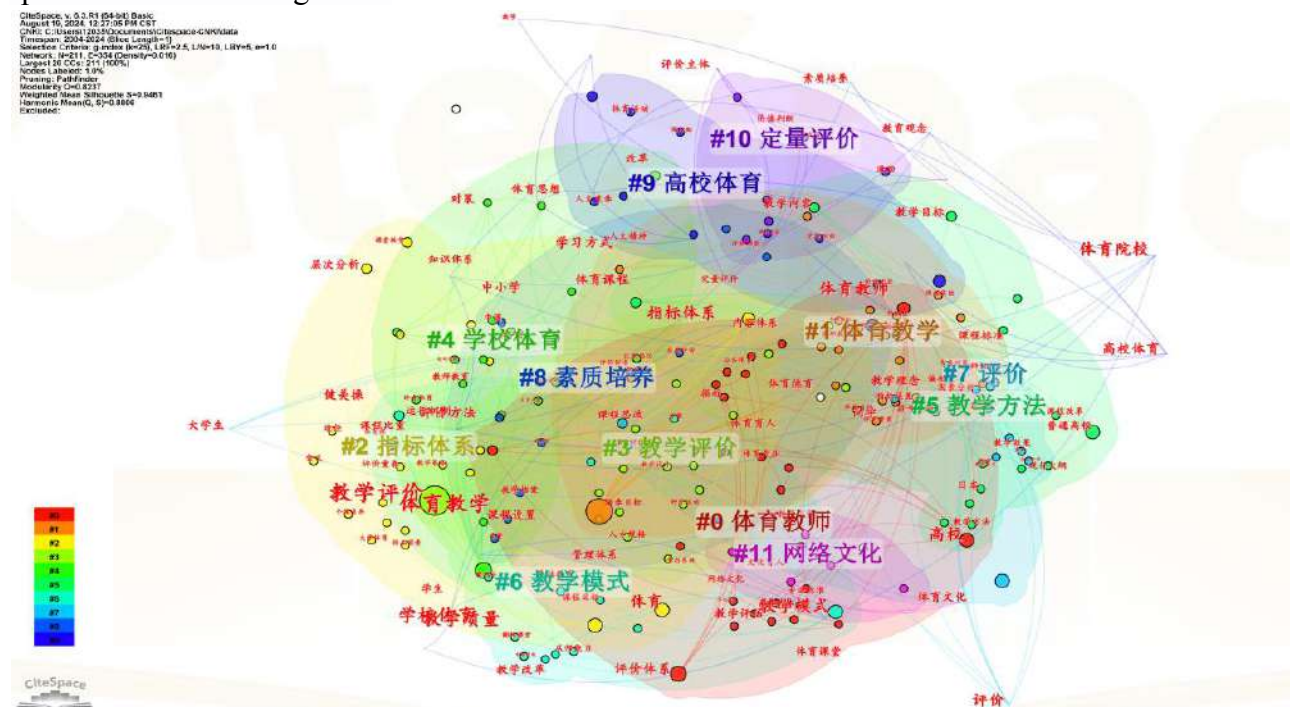
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9	7	universities and colleges	0.40
10	7	regular high school	0.01
11	6	Physical education in higher education	0.15
12	6	sports college	0.11

Keyword clustering analysis

In order to gain further insight into the specific research content, knowledge structure and deepen the co-occurrence relationship in the field of physical education teaching evaluation, the keyword clustering labels were extracted using the log-likelihood rate, LLR (log-likelihood method), and the keyword clustering mapping was obtained (Fig. 5). In the atlas, the clustering modularity value (Q) and the weighted mean silhouette value (S) are used to assess the significance and homogeneity of the clustering atlas, respectively. Chen Yue, Chen Chaomei et al. (2015) posited that the Q value within the interval [0,1) indicates the significance of the clustering structure when $Q > 0.3$. Furthermore, when $S > 0.5$, it implies the reasonability of the clustering, while when $S > 0.7$, it signifies the efficiency and conviction of the clustering. In this study, the Q value was found to be 0.8237, while the S value was 0.9461. These figures indicate that all 11 clusters fall within the efficient and reasonable range and are significant. The mapping reveals the formation of 11 distinct clustering modules, exhibiting a high degree of concentration and overlap. This suggests that the research field of physical education teaching evaluation is characterised by a high level of specialisation and integration.



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Fig. 5 Clustering map of keywords of physical education teaching evaluation research in China in the past 20 years

Keyword emergence and timeline analysis

Emergent keywords are defined as words that manifest a greater frequency of occurrence at a specific point in time. They are more conducive to the identification of emerging trends and abrupt shifts in subject development than high-frequency keywords (Li Xiaohua & Cheng Xihui, 2023). In this paper, the Burst Term function is employed to construct keyword emergence maps based on the results of keyword co-occurrence mapping (see Fig. 6). A total of 10 emergent words were identified in 178 documents. The keyword with the strongest emergence intensity was "evaluation" (2.85), indicating that evaluation represents a significant frontier of research in this field and has a considerable influence. The earliest term to appear was "aerobics", which began to emerge in 2007, suggesting that it has been a subject of interest among scholars in China at an earlier stage.

The Timeline view is designed to facilitate an understanding of the relationships between keyword clusters and the historical span of literature within a given cluster (Chen Yue, et al., 2015). In order to analyse the research years of the keyword clusters in order to better clarify the thematic evolution of the research in the field of physical education teaching evaluation, the Timeline view module was selected, with all other parameters unchanged, to generate the timeline view (Figure 7). The Timeline view allows for the clear visualisation of the beginning and ending time nodes of each clustered theme, thus facilitating a more comprehensive understanding of the developmental time interval of the research field of physical education and teaching evaluation. This, in turn, enables the summarisation of the evolutionary path of the research content (Chen Shiji, et al., 2022). Additionally, the figure comprises 11 clusters, each of which is labelled with keywords from the co-occurrence network. These keywords are distributed across the clusters according to the year in which they first appeared in the corresponding time period, thereby illustrating the evolution of keywords within each cluster. By combining the keyword emergence mapping with the timeline view, it is possible to gain a more intuitive understanding of the development of research hotspots in the field of physical education teaching evaluation. This allows for a more accurate prediction of the future development trend in this field.

Top 10 Keywords with the Strongest Citation Bursts



Fig. 6 The emergent keywords (top 10) of physical education teaching evaluation research in China in the past 20 years

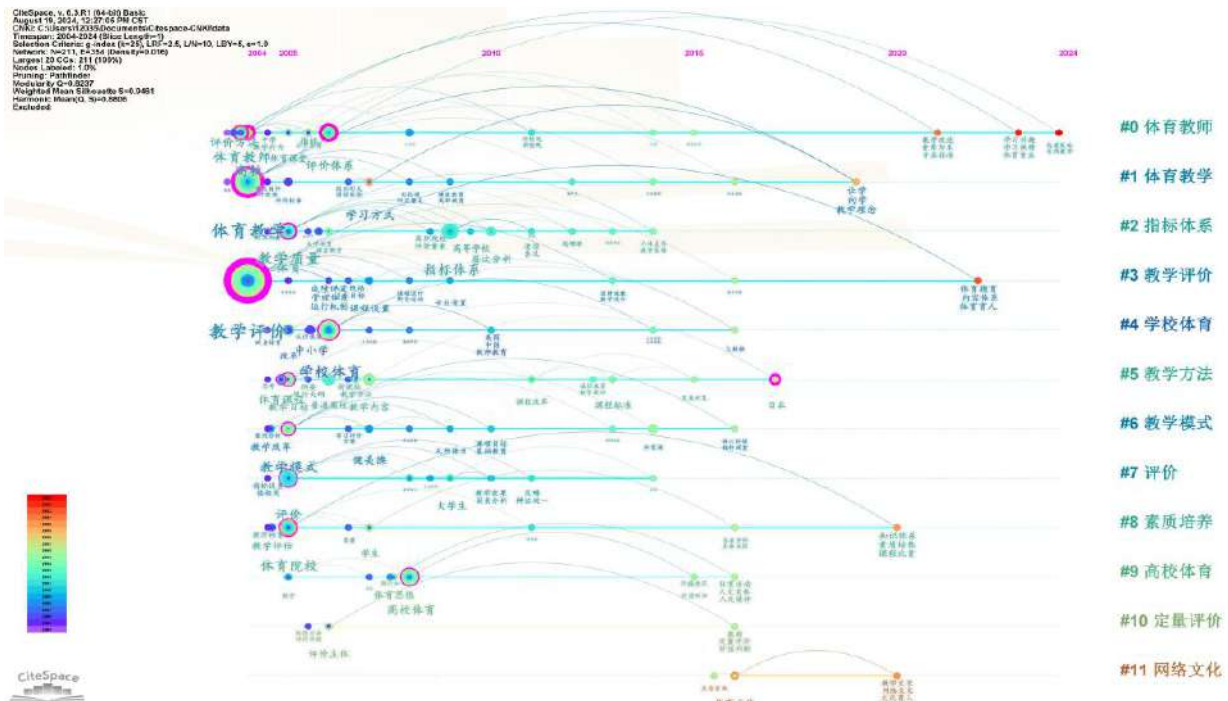


Fig. 7 Time line mapping of physical education teaching evaluation research in China in the past 20 years

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Zhou, C., Huang, W., Hu, C., & Zhang, W. (2024). A visual analysis of the last two decades of evaluation research in physical education teaching. *Journal of Modern Social Sciences*, 1(2), 212–230.

Discussion

Analysis of publications, authors and institutions

A review of the number of articles published annually revealed a downward trend in the field of physical education evaluation research in China over the past two decades, with a peak of 19 articles in 2007. This may be related to the endorsement by the State Council of the Ministry of Education's formulation of the "Eleventh Five-Year Plan for the Development of the National Educational Programme", a policy that calls for the prioritisation of education in order to facilitate the construction of a well-off society. The comprehensive construction of a moderately prosperous society necessitates the prioritisation of educational development. The release of this policy has consequently garnered considerable attention within the academic community (Government portal of the Ministry of Education of the People's Republic of China). Read on 12 November 2024. Since 2019, the average number of articles published has been 2.16 per year. This may be attributed to the outbreak of the Xingquancun epidemic, which made it challenging for educational and teaching activities to resume normal operations. Additionally, the work of "teaching, learning, and evaluation" was hindered, leading to a reduction in related scientific research, which in turn contributed to the observed decline in the number of articles published. With regard to the scientific research cooperation network, the author with the highest number of articles in the China Knowledge Network (CNKI) database is Yu Sumei from the China Academy of Educational Sciences (3 articles). Of these, three relate to physical education teaching evaluation and have not been co-operated with other authors. Instead, they have all been published alone, with the focus on the evaluation system, quality of teaching, and evaluation standards. The research team, comprising Hu Yihai, Li Chen and Zhu Jianzhu, is engaged in the investigation of evaluation indices and the development of an evaluation system. A small collaborative team was formed by Huang Baohong, Wei Dengyun and Sun Jian from the College of Physical Education and Sports of Anhui Normal University. The team's focus was on evaluation indicators and practical applications (Hu Yihai, Zhang Shengkang, Liu Shuzhi, Qu Jianhua, Li Chen, Zhu Jianli, 2005; Huang Baohong, et al., (Huang Baohong & Wei Dengyun, 2005; Wei Xubo et al., 2011; Yu Sumei, 2014a, 2014b, 2018). The research was conducted by a small collaborative team comprising three individuals from Anhui Normal University. A review of the China Knowledge Network (CNKI) database reveals that the College of Sports Science of Nanjing Normal University has published the highest number of articles (6 articles), forming a cooperative network with three institutions, including the College of Physical Education and Sports of Shihezi University. The second highest number of articles is that of the College of Physical Education and Health of East China Normal University and the Wuhan Institute of Physical Education and Sport, with a total of three articles. The second largest group of contributing institutions is that of the College of Physical Education and Health of East China Normal University, the College of Physical Education and Health of Hangzhou Normal University and the Department of Physical Education of Shanghai Jiaotong University, etc. The College of Physical Education and Health of East China Normal University and the Physical Education and

Health Department of Hangzhou Normal University, Shanghai Jiaotong University, etc., have engaged in collaborative research activities, whereas the Wuhan Institute of Physical Education and Sports has not established such partnerships with other academic institutions. This demonstrates that over the past two decades, scholars in the field of physical education teaching evaluation in China have concentrated their efforts on evaluation indexes, evaluation systems, teaching quality and other aspects. Research institutions are primarily located in teacher training colleges and physical education colleges. However, there is a lack of close and efficient collaboration between authors and institutions, with only a limited number of small groups engaged in cooperation. There is a need to strengthen collaboration and exchanges among multi-regions, multi-institutions and even multi-nationals in the future.

Analysis of research hotspots

A keyword analysis reveals that the most prevalent keywords in the field of physical education teaching evaluation pertain to two key areas: the evaluation object and the evaluation content. With regard to the evaluation object, research encompasses a range of institutions, including school sports, colleges and universities, colleges and universities sports, general colleges and universities, sports colleges and universities. This indicates that the majority of research in this field is focused on colleges and universities. On 6 August 2002, the Ministry of Education published the Guideline for the Teaching of Physical Education Curriculum in National Ordinary Colleges and Universities. This document explicitly states that a diversified and comprehensive evaluation should be adopted, and that the evaluation process should pay attention to the students' learning effects and reactions, as well as to the evaluation opinions of relevant societal aspects (Government portal website of the Ministry of Education of the People's Republic of China). (Read on 12 November 2024). The issuance of policies and documents has resulted in a notable increase in the frequency of relevant keywords and the number of scientific research results pertaining to them. (2) In contrast, the study of evaluation content encompasses a range of factors, including the quality of teaching, the mode of teaching, the objectives of teaching, the content of teaching, and so forth. Fu Sen (2018) posits that physical education teaching equipment, physical education teaching methods, and the comprehensive quality of physical education teachers are significant factors influencing the quality of physical education teaching. Similarly, Wu Shengtao (2015) asserts that we should draw upon the exemplary practices of foreign physical education programmes and integrate the efficacious outcomes of foreign physical education teaching methodologies. Dai Xianpeng (2018) identifies the lack of clarity regarding educational objectives as the primary challenge in physical education teaching at the college and university level. Additionally, he asserts that the curriculum is characterised by a lack of variety and engagement, and that the scheduling of courses is not optimally structured. A synthesis of the keywords reveals a trajectory of expansion and transformation in the field of physical education teaching evaluation in China over the past two decades. The research domain has witnessed a shift in focus, with a notable evolution in the direction of in-depth exploration of evaluation content, physical education ideology, physical education interest, passion for physical education, and practical teaching. These emerging avenues of inquiry may emerge as the focal points of future research and development.

Analysis of research trends

By employing clustering, emergence, and timeline view analysis of keywords, the evolution of research hotspots can be accurately grasped, and the future development trend can be further predicted. A 10-year period was selected for analysis, spanning from 2004 to 2014. During this time, research in the field of physical education teaching evaluation primarily focused on physical education teachers, physical education teaching, index systems, teaching evaluation, and related topics. It is evident that scholars in this period are dedicated to exploring a range of evaluation approaches, striving to develop a systematic and practical teaching evaluation framework, and placing a greater emphasis on the fundamental aspects of physical education teaching evaluation. The research comprises the following elements: In the subsequent phase, a number of new research themes emerged, including the introduction of ordinary colleges and universities, teaching reform, and classroom reform. On 9 July 2010, the Central Committee of the Communist Party of China and the State Council published the Outline of the National Medium- and Long-Term Plan for Education Reform and Development (2010-2020). This outlines an action programme for educational evaluation reform, indicating the direction of the reform and emphasising that the process of perfecting the evaluation of physical education teaching is the process of constantly discovering and resolving problems. Read on 12 November 2024. The process of improving the evaluation of physical education is an ongoing endeavour, characterised by the identification and resolution of persistent challenges. The reinforcement of educational evaluation reform is not only an intrinsic necessity for the development of an innovative country and the cultivation of innovative talents, but also an urgent requirement for the resolution of the accumulated shortcomings in educational evaluation (Qiu Junping & Wang Shanshan, 2011). The reform of education evaluation is not only an intrinsic necessity for the development of an innovative country and the cultivation of innovative talent, but also an urgent requirement for the resolution of the issues pertaining to the evaluation of education. Those engaged in the field of physical education evaluation would be well advised to adopt a practice-oriented approach, with a particular focus on the improvement of the evaluation index system. This would facilitate the resolution of issues that have arisen as a result of the reform process, the formulation of appropriate countermeasures and their subsequent implementation. In addition, there is a need to increase the output of scientific research results in order to promote the development of the field of physical education evaluation. From 2015 to 2024, as the teaching reform deepened and modern science and technology developed, research in the field of physical education teaching evaluation gradually transitioned to a more modernised approach. This involved the emergence of new research themes, including teaching mode, network culture, big data and the flipped classroom, among others. The relocation of the research centre may be associated with the emergence of the novel coronavirus (2019-nCoV) epidemic in 2019, the inauguration of the academic year and the influx of students returning to school. Such a significant population movement poses considerable epidemiological risks. In response to the novel coronavirus epidemic, the educational institution has implemented measures to enhance the methodology and technological utilisation of teaching, and has adopted an integrated approach to education and teaching that combines online and offline modalities. Furthermore, in the digital age, the advent of big data and digital technology has provided a significant impetus for the development

of a comprehensive school sports teaching evaluation system (Wang Zipu et al., 2024). The utilisation of digital technology for the assessment of physical education is aligned with the evolving landscape of physical education evaluation in the contemporary era (Han Qiu & Miao Wenzhuang, 2005). In the context of the new era, it is possible to innovate the evaluation method in order to meet the realistic needs of the evaluation of physical education teaching, thereby improving the evaluation effect of physical education teaching and accelerating the reform and high-quality development of physical education teaching evaluation in the new era. The focus of research is subject to change in accordance with the progression of time. In recent years, the key terms that have emerged include sports thinking, learning interest, learning enthusiasm, constructing strategy, practical teaching and so on. These may prove to be of interest to scholars in the field of physical education teaching evaluation in the near future and may well become the focus of new research.

In conclusion, the Citespace visual analysis tool was employed to conduct a comprehensive examination of the literature on physical education evaluation within the China Knowledge Network (CNKI) database over the past two decades (2004-2024). This analysis can serve as a valuable reference point for future research, reform, and development within this field. The analysis demonstrates a decline in the annual publication volume within the field of physical education evaluation. Additionally, the degree of collaboration between authors and institutions is relatively low and dispersed. There is a clear need for enhanced communication and cooperation in this field. Research on physical education evaluation primarily focuses on the evaluation object and content. However, future research may shift towards exploring new areas such as physical education ideology, interest in learning, and practical teaching.

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Conflict of Interest

The authors declare no conflict of interest.

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New Pathways of International Chinese Education in the Digital Intelligence Era

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Abstract

The rapid development of digital intelligence technologies (digitalization and intelligence) is profoundly changing the landscape of international Chinese education. Against the backdrop of the digital intelligence era, addressing the pain points of traditional international Chinese education through emerging technologies such as artificial intelligence, big data analysis, and virtual reality has become an important issue. This article begins with the technological background, explores the far-reaching impact of digital intelligence technologies on international Chinese education, analyzes the current shortcomings and limitations in practice, and proposes new practical pathways through innovative exploration of teaching models, teacher training, and technology application. Additionally, it provides a comprehensive discussion from the perspectives of equity and data ethics. The aim of this article is to offer theoretical support and practical guidance for the innovative development of international Chinese education in the new era.



Full Text Article



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Keywords: Digital Intelligence; International Chinese Education; Artificial Intelligence ; Cultural dissemination

Research Background

The rapid development of digital intelligence technologies, such as artificial intelligence (AI), big data, and virtual reality (VR), is profoundly reshaping global education systems, including the field of international Chinese education. These technologies are not merely tools but catalysts that are driving paradigm shifts in teaching and learning processes. With increasing demand for Chinese language proficiency worldwide, particularly in areas such as business, diplomacy, and cultural exchange, the integration of digital intelligence presents an unprecedented opportunity to expand access, improve learning outcomes, and personalize educational experiences.

1. Global Context and Motivation

The rise of China as a global economic and cultural powerhouse has led to a growing interest in learning Chinese as a second language. At the same time, the COVID-19 pandemic accelerated the adoption of digital tools in education, highlighting both their potential and their limitations. Online teaching platforms, AI-driven learning apps, and VR-based cultural immersion programs have demonstrated their ability to connect learners and educators across geographical boundaries, making international Chinese education more accessible than ever.

2. Current Challenges in the Field

Despite these advancements, the implementation of digital intelligence in international Chinese education faces several challenges:

1.1 Infrastructure Gaps

Unequal access to digital resources across regions creates a digital divide, limiting opportunities for students and teachers in less-developed areas.

1.2 Teacher Preparedness

Many Chinese language educators lack the technical skills and training to effectively use advanced technologies in their classrooms.

1.3 Cultural and Ethical Considerations

The application of AI and big data raises concerns about cultural sensitivity, algorithmic bias, and data privacy, which must be addressed to ensure ethical and inclusive practices.

1.4 Pedagogical Adaptation

Traditional teaching models often struggle to adapt to technology-driven methodologies, leading to a mismatch between tools and pedagogical goals.

3. Significance of Research

This research explores how digital intelligence can provide new pathways for teaching and learning in international Chinese education. By leveraging these technologies, educators can create immersive, interactive, and adaptive learning environments that meet the diverse needs of learners worldwide. The study also aims to identify best practices for integrating these tools while addressing the challenges of infrastructure, teacher training, and ethical considerations. Through this research, we seek to contribute to the development of a sustainable and innovative framework for international Chinese education in the digital intelligence era, ensuring that learners from all backgrounds can benefit from the global spread of the Chinese language and culture.

Research Significance

The deep integration of digital intelligence technology with international Chinese education is of great significance:

1. Theoretical Value: Systematically sorting out the current application of digital intelligence educational technologies in international Chinese education and providing a reference framework for subsequent research.

2. Practical Value: Proposing specific teaching models and implementation paths to provide practical guidance for global Chinese educators.

3. Cultural Value: Promoting the global dissemination of Chinese culture and enhancing cultural soft power by improving language teaching effectiveness.

This paper explores the impact of digital intelligence educational technologies on international Chinese education models, proposes solutions through case studies and problem analysis, and discusses policy and ethical issues. It aims to provide a systematic theoretical support and practical guidance for the innovative development of international Chinese education.

Digital Intelligence Technology and Its Application *in Education*

1. Core Concepts of Digital Intelligence Technology

Digital intelligence technology refers to the organic combination of digital and intelligent technologies, utilizing digital technologies (such as cloud computing, the Internet of Things) and intelligent technologies (such as AI, big data) to achieve new data processing, analysis, and application models. In the field of education, these technologies are manifested as follows.

1.1 Artificial Intelligence (AI)

Includes functions such as natural language processing, speech recognition, intelligent grading, and automated recommendations. For example, AI speech recognition technology can provide accurate real-time feedback on learners' pronunciation, offering important support for oral teaching.

1.2 Big Data Analysis

The collection and analysis of educational behavior data can comprehensively reflect students' learning paths. For instance, based on students' online learning records, their vocabulary proficiency can be analyzed to dynamically adjust subsequent teaching plans.

1.3 Virtual Reality (VR) and Augmented Reality (AR)

VR/AR technologies simulate real-life scenarios, creating immersive experiences for learners. For example, through VR technology, students can "walk into" Chinese traditional festivals, such as

temple fairs or Lunar New Year celebrations, making language learning more closely related to cultural contexts.

1.4 Block chain Technology

In the field of education certification, block chain technology ensures the authenticity and immutability of credits and grade records in international Chinese education.

2. Applications of Digital Intelligence Technology in International Chinese Education

2.1 Global Sharing of Teaching Resources

Digital intelligence technology allows teaching resources to break the limitations of time and space. For example, Beijing Language and Culture University launched a global open Chinese learning platform, providing free access to millions of international learners and becoming an important hub for global Chinese education.

2.2 Flexibility in Teaching Models

Through online live courses, MOOCS, and adaptive learning systems, learners can flexibly arrange courses according to their personal schedules and learning goals. For instance, in Thailand, Confucius Institutes combined local school teaching needs with online courses to expand the coverage of Chinese learning.

2.3 Diversification of Cultural Communication

By combining virtual reality and multimedia interactions, the dissemination of Chinese traditional culture is no longer limited to texts and images but is integrated into the teaching process through dynamic scenes and voice interactions. For example, in the United States, some schools use AR technology to conduct "virtual visits to the Forbidden City," combining language learning with cultural communication, which is well-loved by students.

Problems in Current Digital Intelligence Chinese Education Practices

1. Limitations of Technology Application

1.1 Insufficient Technological Infrastructure

Although digital intelligence technology provides convenience for international Chinese education, there are significant infrastructure differences. For example, in some African regions, online Chinese courses face obstacles due to unstable networks and a shortage of hardware. In some countries, online course participation rates are below 30%, severely affecting learning outcomes.

1.2 Fragmented Platform Functions

Existing international Chinese education platforms have diverse functions and lack unified standards. Compatibility issues between different platforms make it complicated for teachers and students to switch between platforms, with data not syncing properly.

2. Insufficient Teacher Technological Competency

2.1 Lack of Technological Training

Many international Chinese teachers have not received systematic training in digital intelligence technologies, leading to significant gaps in classroom design and technology application. A survey of 1,000 international Chinese teachers showed that over 60% of teachers were unfamiliar with the practical operation of big data analysis and AI tools.

2.3 Psychological Resistance to Technology

Some older teachers have low acceptance of new technologies and tend to use traditional teaching methods, overlooking the enhancement of teaching effectiveness brought by digital intelligence tools.

3. Diverse Learner Needs and Technology Adaptation Issues

3.1 Cultural Background Differences

Learners from different countries and regions have different language learning goals and cultural interests. For example, European learners are more focused on business applications, while Southeast Asian students tend to learn Chinese for daily communication and cultural understanding.

3.2 Differences in Technological Competence

Younger learners are more likely to adapt to digital tools, while middle-aged and older learners may be less interested in learning due to unfamiliarity with technology. This generational gap further complicates the design of digital intelligence courses.

New Pathways for International Chinese Education in the Digital Intelligence Era

1. Innovation in Teaching Models

1.1 Blended Learning

At Gyeongil High School in Korea, Chinese language courses adopt a blended model with online pre-study and offline interaction. The online component uses AI to automatically detect students' pronunciation, while the offline part includes role-playing and cultural activities. This model improves learning efficiency and enhances classroom engagement.

1.2 Immersive Learning

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Through VR technology, students can "walk into" famous Chinese landmarks and traditional scenes. For instance, in a Chinese language training institution in Saudi Arabia, students used VR devices to visit the Great Wall and Terracotta Warriors, learning relevant vocabulary and expressions.

1.3 Gamification of Teaching

In a Confucius Classroom in Thailand, a "Chinese Idiom Solitaire" game was developed, where students interact through game levels to master Chinese idioms. This model effectively enhances students' motivation to learn.

2. Building an Intelligent Teaching Ecosystem

2.1 AI Empowered Classrooms

Through speech recognition and learning data analysis, AI helps teachers adjust teaching content in a timely manner. For example, an international school in Beijing introduced an AI classroom assistant that generates detailed learning reports after each class for teachers' reference.

2.2 Global Sharing of Educational Resources

A cloud-based platform integrating Chinese education resources has been launched, such as the "Chinese Digital Chinese Learning Library," which is now available in over 50 countries. It includes videos, textbooks, and exercises to meet the needs of learners at different levels.

Policy and Ethical Considerations

The application of digital intelligence technologies in international Chinese education is not only a technical issue but also involves complex social, cultural, and ethical considerations. Policy support and ethical standards are crucial for ensuring the sustainable development of digital intelligence education. The following analysis examines five aspects: data privacy protection, technological fairness, the balance of cultural communication, educational resource sharing, and technology ethics.

1. Data Privacy Protection

As digital intelligence technologies become more widespread in education, large amounts of learner data (including learning behaviors, personal information, and language acquisition trajectories) are collected and stored. This data provides important insights for educational institutions to optimize teaching design and improve learning outcomes, but it also raises concerns about data privacy protection.

1.1 Existing Issues

Lack of Transparency in Data Usage: Students and teachers often do not clearly understand the purpose and scope of data usage.

Inadequate Data Storage Security: Some educational platforms lack robust security measures, which may lead to data breaches or misuse.

Differences in Data Regulations in the International Context: Different countries have varying standards for the protection of educational data. For example, the EU's General Data Protection Regulation (GDPR) differs from China's data security laws, which presents compliance challenges for cross-border Chinese education programs.

1.2 Suggested Solutions

Establish a global unified data protection agreement that clearly defines the scope of data collection, storage, and sharing.

Introduce blockchain technology to ensure data security, utilizing distributed storage technology to ensure the immutability and transparency of learner data.

Integrate privacy protection features into platform development, such as anonymizing user data and offering users autonomy over data usage permissions.

2. Technological Fairness

The promotion of digital intelligence education must consider the technological adaptability of different regions and social strata to avoid unequal distribution of educational resources due to technological barriers.

2.1 Regional Disparities

In some economically underdeveloped areas, students may be unable to access high-quality digital education due to a lack of infrastructure. For example, in parts of Africa and South Asia, low internet coverage and limited access to smart devices directly limit students' ability to engage in online Chinese courses.

2.2 Social Class Disparities

The development of digital intelligence education may exacerbate educational inequality. For instance, wealthier learners can purchase high-end devices and subscribe to paid courses, while students from poorer backgrounds may only have access to basic free resources.

2.3 Suggested Solutions

Promote infrastructure development, such as providing government-subsidized low-cost smart devices and stable internet access.

Develop lightweight Chinese learning platforms that reduce hardware and network requirements, enabling more students in different regions to participate in learning.

Through international cooperation, establish education equity funds to support technologically disadvantaged areas with educational resources.

3. The Balance of Cultural Communication

Learning Chinese is not only about mastering the language but also about transmitting Chinese culture. However, in the application of digital intelligence technologies, there may be a disconnect between language teaching and cultural dissemination.

3.1 Existing Issues

Over-reliance on Technology: Some platforms focus on the instrumental aspect of the language to cater to students' learning habits, minimizing the transmission of cultural content. For example, some online courses emphasize the rapid acquisition of Chinese grammar and speaking skills, while providing little input on Chinese traditional cultural knowledge.

Commodification of Cultural Content: Some educational platforms turn cultural content into entertainment, simplifying it and losing depth and authenticity. For instance, some Chinese learning apps provide only superficial explanations of traditional festivals like the Spring Festival, failing to reflect their historical and social significance.

3.2 Suggested Solutions

Strengthen the integration of culture and language: Embed more real-life examples and contexts related to Chinese culture in language teaching, such as using virtual reality technology to recreate traditional Chinese rituals and art performances.

Encourage localized cultural dissemination: Design culturally relevant Chinese cultural courses based on the learners' backgrounds in different countries and regions. For example, in Japan and Korea, content related to Confucian culture can be emphasized, while in Europe and the United States, modern Chinese culture and arts can be showcased.

4. Educational Resource Sharing and International Cooperation

The development of digital intelligence education calls for international cooperation, particularly in resource sharing and platform interoperability. However, the existing mechanisms for educational resource sharing face bottlenecks, impacting the efficiency of international Chinese education.

4.1 Challenges in Resource Sharing

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Diverse Platform Standards: Educational platforms developed by different institutions use different technical standards, lacking unified interfaces, making resource sharing difficult.

Fragmentation of Educational Content: Although there is a wealth of Chinese learning resources, their quality is uneven, and there is a lack of systematic integration.

4.2 Suggested Solutions

Establish a global Chinese education resource library: Led by international authoritative organizations (such as the Confucius Institute Headquarters), integrate high-quality Chinese educational resources from around the world and make them freely available to global learners.

Develop international standards for resource development: Standardize quality and formats in areas like textbook writing and curriculum design to enhance compatibility and applicability of resources.

Promote international cooperation in educational technologies: For example, jointly develop an AI Chinese learning platform for global learners, creating an intelligent teaching system that supports multiple languages.

5. Technology Ethics and Long-Term Development

5.1 Ethical Challenges in AI Teaching

As AI becomes more widely used in education, several potential ethical issues have emerged. For example, students' over-reliance on AI might weaken their autonomous learning abilities, and the "black box" nature of AI decision-making could lead to lack of transparency and fairness in teaching outcomes.

5.2 The Necessity of Ethical Norms

Ensure that Technology Serves as a Supplement: Emphasize that technology is an auxiliary tool for teaching, not a complete replacement for teachers.

Transparency of Algorithms: Educational platforms should disclose the logic behind AI decision-making to ensure that students and teachers trust the technology.

Respect Learners' Autonomy: Incorporate more interactive and human-centered design in teaching, avoiding making students passive "users of technology."

5.3 Recommendations for Long-Term Development

Promote the deep integration of technology and education, focusing on the diversity and innovation of technology applications.

In the development of technologies, ensure that the needs of learners remain at the core, avoiding the trend of "technology-driven" development.

Pay attention to international dialogue on technology ethics and advance the establishment of a global governance system for educational technology.

Conclusion

The digital intelligence era has indeed brought about unprecedented opportunities and challenges to international Chinese education. The rapid advancement and widespread application of technologies such as AI, big data, and VR have gradually permeated and deeply integrated into the various aspects of teaching and learning practices. This has led to a remarkable enhancement in teaching efficiency and a substantial improvement in student learning experiences. For instance, AI-powered language learning systems can provide personalized learning paths and real-time feedback, tailoring the educational process to each student's unique needs and progress. Big data analytics can assist educators in understanding students' learning patterns and behaviors, allowing for more targeted instructional design. VR technology can create immersive language environments, enhancing students' engagement and comprehension.

However, it must be acknowledged that the application of these cutting-edge technologies is not without its fair share of challenges. Insufficient infrastructure in some regions poses a significant impediment to the smooth implementation of these technologies. A lack of comprehensive and stable network coverage, outdated hardware facilities, and limited access to advanced software can all hinder the effective utilization of digital tools in education. Moreover, many teachers may lack the necessary technological proficiency and training to fully leverage the potential of these innovations. They might struggle with integrating these technologies into their teaching methods or might not be familiar with the latest educational software and applications. Additionally, ethical concerns also arise, such as issues related to data privacy, the potential for digital divide to exacerbate educational inequality, and the responsible use of technology in educational settings.

To address these complex and diverse issues, international Chinese education is compelled to embark on innovative paths in teaching models. This might involve the adoption of blended learning approaches that combine online and offline teaching, or the implementation of project-based and collaborative learning strategies facilitated by technology. Strengthening the integration of technology is crucial, which could entail providing teachers with regular training and professional development opportunities to enhance their digital skills. Establishing clear and comprehensive standards is also of paramount importance to ensure that the development of technology in education is equitable, ethical, and sustainable. These standards could cover aspects such as data protection, technology accessibility, and assessment of the educational effectiveness of technological applications.

This paper thus earnestly calls for more comprehensive research and extensive practice in this field. It is essential to conduct in-depth studies on the impact of digital intelligence on language acquisition, teaching methodologies, and cultural transmission. At the same time, practical efforts should be made to explore and implement effective strategies and models that can turn digital intelligence into a powerful and beneficial tool for promoting the widespread dissemination of the Chinese language and culture on a global scale.

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Conflict of Interest

The authors declare no conflict of interest.

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From the text of the novel to the analysis of the hit TV series

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Abstract

From the text of the novel to the hit TV series, this paper takes the TV series "In the Name of the People" as an example to dig deep into the current historical value of anti-corruption and clean government, and it is also a useful exploration to pay attention to social conditions and people's livelihood and create a clean society. "In the Name of the People" is ideologically, the perfect combination of the effective transmission of the main theme and the art of TV drama; In terms of art, the pursuit of realistic narrative techniques, the gathering of powerful actors and a meticulous production team have laid the foundation for the successful broadcast of the show. The warnings and education behind this are worth pondering.



Full Text Article



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Keywords: Novels to TV dramas; Film and television adaptations; Anti-corruption; Clean government; Attention to people's livelihood

Introduction

1. The need to strictly administer the party

1.1 The needs of social reality

“The implementation of Chinese television communication art is aimed at the production and dissemination process of Chinese television” [1]. The production and dissemination of the TV series "In the Name of the People" is inseparable from the artistic expression of nationality and reality, profoundly understands the content of the country's clean government construction and cultural construction, and truly presents the problems existing in the ideology, organization, style, discipline and other aspects of the relevant leaders.

For art dramas, dramas with realistic themes can accurately describe the contradictions of current reality, criticize the shortcomings of social problems, and provide experience for future creations. On the other hand, in terms of artistic content, it pays attention to dramatic conflicts and character building, portrays typical characters in typical stories, shoulders the mission of the theme, and expresses the wit of the characters and the central idea in the tense environmental scenes. "In the Name of the People" has the significance and charm of political themes due to the playwright's

concern for the lower, middle and upper classes of society, the meticulous observation of the daily life of different classes, and the skillful realism of living alone.

“Under the new situation, our party is facing many severe challenges, and there are many problems within the party that need to be solved urgently” [2]. The present era requires us to unremittingly grasp the practice of fighting corruption and advocating clean government. In terms of artistic themes, advocacy is closely related to the requirements of realist aesthetics that we pursue, promoting literature and art to serve life, and the core is people-oriented, so as to express the playwright's unique emotions.

1.2 Meaning of the people

"In the Name of the People" mainly tells the story of the battle of wits and courage between the Supreme Procuratorate against the serious officialdom corruption in Handong Province. According to Zhou Mason's understanding of "in the name of the people", it represents "two meanings": One is a solid faith; The other is to use "the people" as a pretense for personal gain. The latter is the logic and soil of the survival of many corrupt and ultra vires behaviors at present, taking the name of the people to encroach on the rights and interests of the people, and trampling on the spirit of the rule of law in the name of the rule of law. Whether it is a novel text or a television presentation, the supervision system is constantly being improved and effective supervision of party-member leading cadres is being promoted, so that it is conducive to enforcing discipline according to law, handling cases according to law, strengthening the building of party style, and organizing and coordinating anti-corruption work.

In the TV screen, "The reader is introduced to a new country like a traveler"[3], the details of official corruption and the country's anti-corruption process are presented and portrayed in detail in the plot, and people are also curious about how similar the characters in TV are to reality, comparing the characters in the play with the officials who have now fallen from power, such as:

Fiction text/TV series	Realistic reference prototypes
1.Dafeng Plant Equity Incident	Zhou Mason's own incident.
2.Ouyang Jing bribed a bank card to buy clothes	The case of the Anti-Corruption Bureau of Pukou District, Nanjing.
3.Zhao Dehan's character image in the play	"Director of 100 million yuan" Wei Pengyuan, former deputy director of the Coal Department of the National Energy Administration.

In order to find the "prototype" of the characters in the play, it is not difficult to see the deep meaning of "In the Name of the People", and to promote the implementation of the system of strictly governing the party and cracking down on corruption, bribery, etc., it will undoubtedly be difficult and difficult. People-oriented, deeply loved by the audience. In terms of exploring the

expressiveness of literature and art, reflecting the true face of real life and carrying the cultural spirit of the nation, novels and film and television dramas play an important role.

2. The adaptation of the original storyline of the TV series "In the Name of the People".

In the process of establishing film and television adaptation, it is necessary to perfectly combine the interpretation of the novel text with the audio-visual art of television, and its content theme should contain certain values, pay attention to art forms such as photography, directing and performance style, and need to invest more energy to connect with the audio-visual feast presented by TV.

2.1 Re-portrayal of the storyline of the original novel

When the text is moved to the screen, it will be limited by time and space to a certain extent, and if the script is adapted well and the actors act well, the audience who has watched the TV series will tell each other, and it is well known. Literary works have a natural advantage over TV dramas in terms of in-depth analysis, novels can describe stories with beautiful words, but TV dramas can only be expressed with simple lines, voiceovers, shots, etc.

On the basis of the novel, the TV series "In the Name of the People" reproduces the real-life version of the officialdom scene, showing us the whole picture of the entire psychological activities of the country's high-ranking officials from bribery to arrest. In the process of writing, the author can list the general storyline in advance, write multiple storylines for repeated revision, and then screen. The TV series needs to concentrate on the storyline of this chapter, express it completely and clearly on the basis of being faithful to the theme of the original work, and try to restore it to the original work.

The advantage of the novel is that it should be clearly described, so that the reader can have a lot of room for imagination. At this time, the advantages of video stand out, condensing the text in a two-dimensional space, using a unique audio-visual language to help the audience sort out the subtle relationship between the characters, and assisting a large amount of background information to the audience. According to these internal and external factors, the storyline is perfected and the suspense of the story is maintained. The difficulty of the TV series to extend the depth of the novel can be imagined, and whether the adaptation is appropriate has become the key to the success of the TV series, which invisibly increases the pressure on the director.

Judging from the prominent text of the novel, "people" is mentioned only 93 times, far exceeding the most frequent mention of "money" 170 times, "embezzlement/corruption" 67 times, "corrupt officials" 32 times, and "ideal" and "justice" only 2 times each. With the word "teacher" as the center of the circle and other related words as the radius, the statistics of the "Han Gang" throughout the plot show that the original work is more like an anti-corruption novel related to money. This narrative mode leads the audience into the play, deeply experiencing the connotation of the theme, and thinking about the ideographic function between the past and the present, between dream and reality.

2.2 Reshape the characters of the original novel in the original novel

Character image is a very important part of both literary works and film and television, and can sublimate the theme through character image. "A character is a personified image with a specified characteristic that the narrator tells us"[4], The story in the novel can be told by multiple clues, and the reader should self-deduce and understand the thinking context behind each character. The clue of the TV series adaptation is single, and it is necessary to consider that the characters designed by the novel and the audience's perspective cannot be too different. In terms of the number of appearances of the characters alone, Hou Liangping is undoubtedly the first actor, as high as 1355 times in the novel, which is twice as high as the number of appearances of Secretary Li Dakang, who ranks second.

In this drama dominated by men, the characters led by the "Han Gang" appeared in the top six, and Gao Xiaoqin, the beautiful boss who has been between the political and business circles, and the senior officials of the entire Handong Province basically have nothing to do with her, her appearances are not even a fraction of that of the male protagonist Hou Liangping, only 329 times, It involves the depth of interpretation of a play.

Hou Liangping is the center of the overall situation, and all the characters in the play are related, of course, they are most closely related to their colleagues in Handong who fight wits and courage together. Unexpectedly, every time Hou Liangping appeared with his "righteous and evil" Fa Xiaocai Chenggong, he appeared the most times, followed by the second Gao Yuliang and the third Qi Tongwei. Hou Liangping is a positive character, representing the country and the government, and his appearance is often a "rival play", which greatly attracts the audience.

Qi Tongwei's character analysis, he is a villain who can't make up his mind and suffers from gains and losses. There are no pure good or bad people in the world, but in the face of great rights and wrongs, the decisions made have become the label for evaluating a person, and the disgust for him is mixed with sympathy for him. He was an excellent student at Handong University, and he and his "Three Heroes of Handong" Chen Hai and Hou Liangping entered the provincial-level organs as soon as they graduated. Because he was treated unfairly at work, he volunteered to join the anti-narcotics team to change the status quo, and actively worked hard to make meritorious contributions, but he still could not be transferred back to Beijing to work.

"The concept of film and television culture is reflected in the value orientation and value concept of film and television. [5] "In the face of reality, he gave up his dignity, he proposed to Liang Lu in public at school, vowed to become strong, wanted to take revenge on the world Director Qi, and finally ended his life. He is a villain, punished by the laws of the country, and has paid the price of his life for it, even so, the audience can't help but want to sympathize with him. A term called power can ruin a person's life to put it mildly.

3. The inheritance and development of the audiovisual image of the original novel

Since the last century, TV dramas have long become an important viewing object in our lives, it is not only a simple entertainment tool for people, but also an important medium to spread positive energy, an intuitive object to transmit culture and reproduce reality.

3.1 Narration through auditory elements

The TV series "In the Name of the People" has strong compatibility in terms of image. For example, through the selection of actors, the selection of the environment, the setting of the atmosphere, the way of movement, the application of music, etc., the audio-visual effect is created.

"A good cinematographer or TV cameraman should be able to use a camera or video camera creatively"[6]. The adaptation process of the TV series is the process of the second creation, and it is necessary to insist on transmitting positive energy, and under the condition that the theme is unwavering, the combination of audio-visual elements has become a necessity for the successful broadcast of "In the Name of the People", which not only enriches the characters and expands the narrative space, but also presents a rich and imaginative picture. In the play, Secretary Dakang's feelings for his wife have very few dialogues on the surface, but in fact, he has his implicit love and guilt for Ouyang Jing, and takes the initiative to explain Ouyang Jing's crimes to the leader Sha Ruijin, promote the development of the story, and convey the rich connotation of the subtext.

In the play, subtitles and narration are used to explain the time, place, and background of the story's development to help the audience understand the storyline. The many uses of voiceover explain Sun Liancheng's hobby of astronomy, and he does not do practical things in his job. Sound is also equally important in the play, for every time an official receives an order from a superior, a series of procedures such as arresting and questioning him are inseparable from the role of sound as the finishing touch to the plot. Listening to its voice can show different time and space, narrating what happened.

3.2 Application and analysis of montage techniques

The use of parallel montage summarizes the plot of the novel in a concentrated manner, the first episode of the TV series "In the Name of the People". Hou Liangping kept calling Chen Hai, one saying that he had captured Zhao Dehan, and the other forcing Chen Hai to hurry up and arrest Ding Yizhen. Chen Hai, Ji Changming, Gao Yuliang and others held a meeting in the conference room, hoping that the provincial party committee would issue an order, and Lu Yi and others were at Ding Yizhen's party, Ding Yizhen suddenly received a mysterious call and left in a hurry. Editing three different time and space together at the same time, with the main task of catching Ding Yizhen, the three clues are carried out in an orderly manner, providing the audience with the possibility of flexible transformation of time and space.

Although Chen Hai's father is a supporting character in the film, he is undoubtedly one of the most impressive characters in the play. The leader respects him, the people trust him, and the use of parallel montage once again increases the audience's respect for the old man Chen Yanyan. At the same time, it also shows the hatred of Gao Xiaoqin and others, which further reflects that the people need more Comrade Chen Yanyan to uphold justice and fight grievances for them, the people need him, the society needs him, and the country needs him even more. A successful TV series can allow the audience to experience their inner emotions through watching the TV series, trigger thinking about reality, and resonate with life, and the TV series "In the Name of the People" is no different.

3.3 New development of audiovisual art under modern technology

Since the 20th century, every development of science and technology has impacted the transformation of film and television art, and its influence is deep and wide. As the carrier of

communication media, television has become an inseparable part of film and television from black and white to color, desktop to liquid crystal, and terrestrial transmission to online live broadcast. "The uniqueness of photography lies in its essential objectivity" [7], In the TV series "In the Name of the People", the scene of Ding Yizhen's disaster abroad is directly and intuitively interpreted, and the computer synthesis is used to give the audience a real feeling.

The Dafeng Factory incident, the anti-drug incident in the line of fire 23 years ago, the Shanshui Manor incident, etc. When the means of technology merge with the development of the storyline. It reflects the director's grasp of the details of the lens, filters the picture, and strives to keep the picture and the lens close to reality, so that the audience can experience the logical and real feelings in the picture. We have reason to believe that audiovisual art under modern technology will have more room for development.

Conclusion

Summary,In the process of adapting the text of the novel to the TV series, an organic text with its own independent expression and ideological connotation has been formed. The TV series "In the Name of the People" has formed a unique artistic expression, each actor is a profound character, and the critical spirit shown has gained value beyond real life. The influence of film and television creation on the audience has appeared, the promotion of the main theme and adherence to the correct cultural orientation, are related to the cultivation of the national spirit, to promote the audience's aesthetic level and life perception ability. The audience also has a negative effect on film and television, and the ratings and box office are used as the criteria for evaluating a work, which reflects the quality and level of the work to a certain extent, which is enough to prove that it is an excellent work.

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The authors declare no conflict of interest.

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Study on the Intervention of Outside Powers on the Korean Peninsula from the late 19th Century to the Mid-20th Century — From the Perspective of Intervention Theory

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Abstract

From the late 19th century to the mid-20th century, the geostrategic significance of the Korean Peninsula evolved, becoming a focal point for major powers' strategic interests. This paper analyzes the intervention behaviors of Russia, China, Japan, and the United States from the perspective of "intervention theory." Initially, China shifted from a passive to an active intervention policy to counter Japan's growing influence in Korea, especially after the First Sino-Japanese War. As China weakened, other powers, including Russia, the U.S., and Germany, increased their impact. In the early to mid-20th century, Japan's ambitions led to more aggressive interventions. The United States, departing from its Monroe Doctrine, used economic and cultural means to influence the region. After World War II, the U.S. and Soviet Union emerged as the main powers intervening, leading to a power vacuum and the outbreak of the Korean War. This historical analysis through intervention theory offers new insights into contemporary Korean issues.



Full Text Article



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Keywords: intervention theory; Korean Peninsula; geopolitical influence; outside power intervention

Introduction

The Korean Peninsula's unique geographical location, bordered by the Sea of Japan to the east, facing Japan across the Korea Strait to the south, and sharing a border with China to the northwest, has endowed it with significant geostrategic importance. This geographical positioning has had profound implications for the historical and security developments of the world.

This paper focuses on the late 19th century to the mid-20th century, examining the evolution of the geostrategic position of the Korean Peninsula from. The selection of this time frame is crucial

because the geostrategic position of the Korean Peninsula during this era was influenced by its status before the modern period and has directly impacted its position post-World War II, as well as its current state. A particularly noteworthy aspect of this period is the dramatic transformations experienced by countries with vested interests in the Korean Peninsula. These nations underwent significant historical transitions, either from prosperity to decline or from decline to prosperity, which in turn led to historical shifts in their policies towards the Korean Peninsula.

In terms of theoretical framework, this paper employs the perspective of intervention theory to study the complex issues of the Korean Peninsula from modern times onwards. This approach not only avoids the one-sidedness of arguments that focus solely on historical facts but also addresses the idealized issues of national strategic goal setting that existing research has often overlooked. By logically analyzing these issues from a theoretical standpoint, the research aims to achieve greater rigor in its examination and process. The paper will analyze the initial intentions behind the strategic goals set by neighboring countries around the Korean Peninsula, the diversity and evolution of their intervention methods, and the characteristics of their strategic choices. The Hypothesis is the change of the geopolitics status of the Korean Peninsula from the late 19th Century to the Mid-20th Century is constantly changing. Because of the inextricable relationship between the international system and the way of state behavior, the change of the international system will inevitably lead to the adjustment of the way of state behavior.

Based on the research questions, there are four major parts in the study. This study will firstly lay the groundwork by exploring the key principles and frameworks of intervention theory, which will be used to analyze the actions of external powers on the Korean Peninsula. Then this study will highlight significant events and socio-political conditions that shaped the region from the Late 19th to Early 20th Century. Part 4 examines the specific actions and influences of various foreign powers like China and Japan, focusing on their strategic interests and impacts on Korean sovereignty. The fifth part delves into the geopolitical dynamics and interventions by major powers such as Japan, Russia, and the United States surrounding World War I, analyzing their motives and consequences. Part six continues this exploration, assessing the intensified interventions and changing power dynamics before, during, and after World War II, leading up to the division of Korea and the onset of the Cold War.

Theoretical Framework

Intervention theory is a significant concept in the field of geopolitics, referring to the theoretical framework through which external forces interfere with or influence the internal affairs of a specific region or country.^[1] According to scholar Johan Galtung's definition in his book *Geopolitics*, intervention theory is described as an analytical tool for understanding how external powers influence the internal affairs of other countries or regions through political, economic, military, or cultural means. Robert Keohane and Joseph Nye discuss different forms of intervention in international relations in their book *Power and Interdependence: World Politics in Transition*. They explore how major powers intervene in smaller countries and how multinational corporations influence national policies, addressing issues from political, economic, and military perspectives. They propose the concepts of interdependence and cooperation.^[2] Asher Arian, in his book *The*

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Politics of Intervention: International Interactions in a World of Sovereign States, analyzes the political motivations and behavior patterns of intervention in international politics, as well as the impact of intervention on the international system. He introduces the concepts of control and negotiation, examining how different countries achieve their interests through intervention. This theory involves the intentions, motivations, and methods of external forces, as well as the impacts and consequences of their actions on the target regions or countries.^[3]

Many scholars have begun to study intervention behavior as a significant pattern of action in international relations. American international political scientist Kenneth N. Waltz posits that the United States has two tendencies in its intervention policies. One is optimistic non-interventionism, which believes in inaction and lack of responsibility, assuming that the world will naturally evolve into a state of peace, harmony, and democracy. The other is messianic interventionism, which imbues intervention with a messianic spirit, justifying interventions as a sacred mission and moral obligation.^[4] Hans Morgenthau and Henry Kissinger, from a realist perspective, discuss the impact of a conflict-ridden international society and its anarchic nature on state behavior. They explain the pattern of American foreign actions as based on the fundamental hypothesis of political realism, where the motivation for state intervention is driven by selfish national interest considerations.

James N. Rosenau defines the concept of intervention from multiple dimensions, including moral, legal, and strategic perspectives. His definition is broad enough to encompass the common perceptions of the term, viewing intervention as the actions of external forces exerting influence on state sovereignty with the aim of changing the status quo, such as subverting another country's legitimate government.^[5] Following Rosenau, Vincent's understanding of intervention theory emphasizes the coercive nature of intervention actions and their targeting of internal authority. He argues that "the threat of using force can be seen as a precursor to an intervention event, while using force to enter a country and forcibly change its political authority structure is an act of interference." Furthermore, "intervention must be an 'active' behavior. The neutral attitudes of countries like Britain and the United States during the Spanish Civil War, as well as the so-called 'non-interference principle,' should not be included in the scope of 'intervention' studies.^[6]

In summary, scholars at home and abroad have provided multi-dimensional perspectives and rich historical case studies by defining the concept of intervention and theorizing intervention behavior. They have thoroughly organized and analyzed the characteristics of interventions in different periods and state behaviors, greatly aiding the observation of inter-state interference phenomena and the realistic political understanding of intervention behavior patterns.

This study uniquely examines the intervention of outside powers on the Korean Peninsula from the late 19th century to the mid-20th century through the lens of intervention theory. By integrating historical events with theoretical frameworks, it provides a comprehensive analysis of the motivations, strategies, and impacts of foreign interventions. Unlike previous works that may focus solely on historical narratives or theoretical constructs, this study bridges the two, offering a nuanced understanding of how global power dynamics and evolving international norms influenced interventions and shaped the geopolitical landscape of the Korean Peninsula.

Brief Historical Background of Korean Peninsula from the Late 19th to Early 20th Centuries

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Before the 19th century, changes in the international political situation in Northeast Asia were mainly influenced by shifts in national power. However, with the continuous impact of external powerful forces, by the late 19th century, significant forces from outside the Northeast Asia region began to intervene on a large scale, leading to a transfer of national power dominating the Korean Peninsula. The modern history of international relations in Northeast Asia has been constantly evolving around the Korean Peninsula, with neighboring major powers continuously engaging in strategic maneuvers. They have demonstrated their unique characteristics in the interactions within Northeast Asian countries, between these countries, and with regions outside Northeast Asia. Overall, the trend of change has shifted from relationships among feudal states to opposition between feudal and capitalist countries, and then toward confrontation between capitalist powers. The focal point of interstate conflicts has gradually shifted from peripheral areas to the region centered around the Korean Peninsula.

This period marked the beginning of a tumultuous era for Korea, as it became a strategic battleground for external powers. The late 19th century saw the intrusion of Western imperialism, with countries such as the United States and various European nations seeking to establish their influence through trade agreements and diplomatic missions. Concurrently, Japan, following its Meiji Restoration, rapidly modernized and militarized, setting its sights on Korea as part of its imperial ambitions. The First Sino-Japanese War (1894-1895) and the Russo-Japanese War (1904-1905) were significant conflicts that underscored the intense rivalry between these powers for dominance over Korea. These wars resulted in Korea's transformation from a tributary state of China to a Japanese protectorate and eventually its annexation by Japan in 1910. The late 19th and early 20th centuries thus represent a critical juncture in Korean history, where the peninsula was profoundly shaped by the geopolitical machinations of powerful foreign nations, leading to substantial and lasting impacts on its national sovereignty and regional dynamics.

The international relations of modern Northeast Asia differed from those of today because the concept of sovereign states was not fully developed at the time. Both China and Japan were feudal autocratic states, and Korea was a vassal state of China. The foreign policies of the surrounding countries of the Korean Peninsula, based on Confucianism, influenced the relations among the neighboring countries of the Korean Peninsula. Under the traditional Sino-centric tributary system, China's relations with neighboring countries were maintained through trade and tributary relations. The central dynasty focused on the value of political relations, while the tributary states sought commercial benefits.

After the Meiji Restoration, Japan's ambitions for the Korean Peninsula grew increasingly ambitious. In February 1876, Japan forced Korea to sign the Treaty of Ganghwa, also known as the Japan-Korea Treaty of Amity and Commerce, under military threat.^[7] This treaty marked the beginning of unequal treaties imposed on Korea, forcibly integrating it into the capitalist world system. However, Japan's aggressive expansion policy on the Korean Peninsula collided with China's security and its policy toward Korea, highlighting the geopolitical importance of the Korean Peninsula in the struggle between China and Japan. Not only did the Sino-Japanese Treaty and the Treaty of Ganghwa challenge China's tributary order, but the intervention of Western imperialist powers also exacerbated the inherent contradictions within the traditional East Asian order, making

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the geopolitical significance of the Korean Peninsula visible on the Eurasian continent for the first time.

In the 1880s, European and American countries vied to open Korea's doors. In October 1883, Chester Alan Arthur, the 21st President of the United States, received Korea's first envoy, Min Yeong Ik^[8], in Washington. Min Yeong Ik's visit to the United States opened up new perspectives for Korea's modernization and had a profound impact on Korea's political, economic, and technological development. The United States and Korea signed the Treaty of Amity and Commerce in May 1882, opening up Korea's relations beyond China and Japan to the West. During the signing of the Korea-US Treaty, the main contention centered around the issue of Sino-Korean suzerainty. Li Hongzhang^[9] insisted that this aspect be included in the treaty. However, the United States' stance was ambiguous, as it needed to consider which situation would be more beneficial for American trade—Chinese suzerainty or Korean independence^[10]. Korea was the last East Asian country to open up to Western countries, and the United States was the first Western country to sign a treaty with Korea. From the unintentional breach of the Sino-Japanese Treaty to Japan's challenge to Sino-Korean relations in the Treaty of Ganghwa, the Qing government inadvertently accepted certain aspects of the content and form of modern European and American international orders and incorporated them into Sino-Korean relations.

At the same time, in 1886, as the Jujin Island Incident had not yet concluded, Tsar Alexander III of Russia issued an order to "build a trans-Siberian railway along the shortest route."^[11] The construction of the Trans-Siberian Railway by Russia added pressure on Japan's security and formed a new pattern of international relations in Northeast Asia, prompting Japan to launch wars urgently and shape a relatively favorable international environment. It was at this moment that the internal turmoil in Korea provided Japan with an opportunity to implement its aggressive policies toward Korea, leading to the Donghak Peasant Revolution in Korea in 1894. This internal turmoil in Korea became the fuse of the First Sino-Japanese War, making the Korean Peninsula once again the focal point of geopolitics in East Asia and even the entire world. The core of the conflict between China and Japan lay in the Korean Peninsula, and the First Sino-Japanese War further highlighted the geopolitical importance of the Korean Peninsula.

The Intervention of outside Powers on the Korean Peninsula from the Late 19th Century to Early 20th Century

In May 1882, the King of Korea dispatched an envoy to China, stating, "Given that foreign powers are monopolizing trade profits, and their ships are sailing the seas, whereas only the Celestial Empire and our nation are adhering to the maritime prohibition, it is clear this is not in line with treating us as an integral part of the empire. It is urgent to issue a decree allowing mutual trade at already open ports and to permit envoys to reside in the capital, thereby fostering good relations, enhancing prestige, resisting external insults, and bolstering public confidence."^[12] This proposal suggested comprehensive trade and an adjustment of the tributary relationship. The request for comprehensive trade was greatly appreciated by the Qing, as they had already accepted the modern concept of commercial trade and hoped for a prosperous and strong Korea. They believed that only a powerful Korea could effectively serve as a buffer state, which was a positive outlook. However,

the overall framework of Sino-Korean relations could only adapt within the tributary order, which was evident in the prohibition against Korean envoys residing in Beijing. Meanwhile, China could dispatch envoys to the Korean capital under the tributary system to demonstrate its status as the suzerain state. This principle of not departing from the tributary relationship guided the signing of the Sino-Korean agreements. Due to the impact of the Imo Incident in Korea, it was not until November 1882 that China and Korea formulated the Regulations for Maritime and Overland Trade between China and Korea. Subsequently, they also established the Regulations for Trade between the People of Fengtian and Korea and the Regulations for Trade between the People of Jilin and Korea. To maintain and highlight the Sino-Korean tributary relationship, it was specifically noted that "Korea has long been a vassal state of China, and the established maritime and overland trade regulations reflect China's preferential treatment of its vassal state, rather than the equal treatment applied to other nations."^[13]

From the unintentional breach of the tributary order by the Sino-Japanese Treaty to the challenge posed by the Japan-Korea Treaty of Ganghwa to Sino-Korean relations, China gradually shifted from a passive policy of non-interference to an active intervention policy to counter Japan's expanding influence in Korea. By the time the Korea-US Treaty was signed, China actively played the role of the suzerain state, using an interventionist policy to plan a future for Korea. The Sino-Korean regulations, in written form, reinforced the tributary relationship within Sino-Korean relations, providing a basis for enhancing China's position in Korea. Throughout this historical process, the Qing government inadvertently accepted certain aspects of the modern international order from Europe and America, integrating them into the Sino-Korean tributary relationship. The fundamental aim was to maintain a dominant position on the Korean Peninsula through an active policy towards Korea, competing with expansionist forces represented by Japan, thereby ensuring the independence of Korea and the security of China.

Although the Sino-Korean relationship remained unequal during this process, the Qing government's goal was to promote Korea's independence and development, reducing its reliance on expansionist nations, which objectively benefited Korea's national interests. The transformation of the tributary order had a significant impact on the subsequent development of Korean history.

After the First Sino-Japanese War, Japan and Russia engaged in an intense struggle over the Korean Peninsula. Following the "Triple Intervention" which forced Japan to return the Liaodong Peninsula, Japan entered a phase of "enduring hardship to prepare for revenge." During this period, Japan was still in the process of building up its strength and lacked the capacity and international conditions to wage war against Russia, so it adopted a policy of compromise towards Russia. Russia, on the other hand, had not yet completed the Trans-Siberian Railway and did not have a strong presence in Northeast Asia. Moreover, Russia's political advantage in Korea had just been established, so it also pursued a peaceful policy. Consequently, in May and June 1896, Japan and Russia signed two interrelated agreements: the Komura-Weber Memorandum and the Yamagata-Lobanov Protocol. These agreements granted Russia considerable and significant rights in Korea.^[14] Leveraging its newly acquired political advantages in Korea, Russia began to strengthen its control over the Korean Peninsula. After the agreements, Russia took steps such as sending military and financial advisors to Korea, establishing the Russo-Korean Bank, and setting up Russian language schools, aiming for comprehensive control over Korea in political, military, and financial aspects.

Russia's series of actions caused significant dissatisfaction among major powers. More importantly, in November 1897, the German occupation of Jiaozhou Bay—a major event that shook East Asian international relations—occurred. This event spurred Russia, which was eager to build a branch of the China Eastern Railway, secure an ice-free port in China, and possibly partake in the partition of China, to seek to ease tensions with Japan over Korea. As a result, after resolving the Liaodong Peninsula issue in March 1898, Russian Minister to Japan Roman Rosen and Japanese Foreign Minister Nishi Tokujirō signed the Nishi-Rosen Agreement in April. This agreement recognized Japan's economic dominance in Korea.^[15] Through the 1898 agreements between Japan and Russia, Japan gained a superior position in the struggle for the Korean Peninsula, leading to a resurgence in Japan's policy towards Korea, signaling a comeback.^[16]

In August 1910, the signing of the Treaty of Annexation between Japan and Korea led to Korea becoming a colony of Japan, marking the beginning of Japan's 36-year-long colonial rule over Korea. During this period, trade between the United States and Korea was mainly facilitated through the Japanese embassy in Washington and the Tokyo government. However, trade development did not bring as much economic benefit to the United States as expected; instead, missionaries, teachers, doctors, and individuals engaged in charity work in Korea played a significant role in promoting American culture in Korea.^[17]

Britain's primary objectives in East Asia were to protect its trade interests and prevent Russian expansion southward. Initially, Britain supported China's suzerainty over Korea to counterbalance Russian expansion in East Asia.^[18] However, as Japan's power rapidly increased, Britain's strategic focus gradually shifted towards aligning with Japan. Russia adopted a strategy of balancing power in the Far East to prevent any single country from threatening its interests in Korea. Although Russia was skeptical of Chinese control over Korea, it initiated mediation between China and Japan before the outbreak of war to avoid unfavorable consequences for its Far Eastern policy.

Germany maintained a neutral stance on the Korean issue, believing that conflicts between China and Japan could lead to conflicting interests between Britain and Russia in Korea, and Germany had no interest in being involved in this dispute.^[19] The United States, due to its close economic ties with Japan and its disdain for the Qing government, chose to support Japan. Economically and morally, the United States leaned towards Japan, considering it an essential partner in implementing American Far East policy.^[20]

Japan's thorough preparation contrasted sharply with China's internal turmoil and insufficient military modernization before the war. China's pre-war response was hasty and lacked strategic unity, leading to a disastrous defeat in the early stages of the war. The signing of the Treaty of Shimonoseki in 1895 forced China to recognize Korea as an independent country, ending the longstanding tributary system and signaling a significant shift in the power dynamics of East Asia. The treaty not only highlighted Japan's ambitions in Korea but also indicated the profound influence of the strategic orientations of the great powers on the regional situation.

Through an examination of this history, it can be observed that Japan and Russia's competition and aggression towards Korea in the late 19th to early 20th centuries were incorporated into their expansion strategies of "Northern Expansion" and "Far Eastern Expansion." The conflict between the two ultimately reached a climax over the Korean issue, which was an inevitable result of resorting to armed intervention. The different outcomes of the war also influenced the subsequent

formulation of expansion strategies by both countries. Japan, with the benefits gained from its victory, continued to expand its dominance in Northeast Asia, while Russia's Far Eastern policy underwent a strategic shift from fierce competition with Japan to the "Russo-Japanese Entente" expansion strategy.

Compared to Japan and Russia's direct armed intervention, the United States adopted a more covert and acceptable intervention policy, employing cultural, religious, and financial means as a more diversified intervention method than China's tributary system and Japan's colonial policies. This intervention approach served the Roosevelt administration's Far East policy, aiming to balance the power among neighboring great powers through Korea.

The struggles of various countries for their respective interests on the Korean Peninsula not only profoundly affected the political landscape of East Asia but also had extensive implications for the global situation. Korea's departure from the Qing tributary system and its nominal independence not only led to the complete disintegration of the East Asian tributary order but also resulted in the collapse of the Qing Dynasty's security barrier in Northeast Asia. At the same time, after losing the protection of the suzerain state, Korea's sovereignty and security faced greater threats. In the Sino-Japanese War of 1894-1895 and the subsequent international maneuvers, the Korean Peninsula demonstrated its unique geopolitical value, with far-reaching significance for the evolution of East Asia and the world situation.

The intervention of major powers around Korea Peninsular before and after the First World War

After China's defeat in the Sino-Japanese War and the signing of the Treaty of Shimonoseki with Japan, Korea severed its tributary relationship with China, leading to the collapse of the tributary system. Following the Russo-Japanese War, Russia, due to its defeat, was forced to withdraw from its competition over Korea and cede the southern part of the occupied area in Northeast China. During this period, as the Ottoman Empire had already established a relatively stable balance of power in Europe after years of competition among the great powers, and Britain and Russia had also reached a relatively stable status quo in Central Asia, almost all major European and American powers shifted their policy focus to East Asia, "because all the great powers are interested in similar enterprises".^[21] The importance of East Asia in the competition among the world's major powers continued to rise.

After the early 20th century, within the framework of the treaty system, capitalist countries utilized every means of expansion to nearly divide the world completely, leading to the escalation of competition for overseas colonies and trade markets, which became the primary contradictions among imperialist nations. As the rivalry for interests intensified and contradictions deepened among imperialist countries, along with conflicting expansion policies, it eventually led to the formation of two opposing imperialist military blocs in Europe and the outbreak of the First World War.

The United States became increasingly vigilant and concerned about Japan, demanding that Japan agree to joint intervention with the United States in the Far East within the framework of "limited military deployment." Under these conditions, the United States timely adjusted its intervention strategy after its initial mistaken neutral stance towards Japan's colonization of Korea,

thus achieving a relatively balanced approach in its strategies towards the Soviet Union and Japan. However, the new intervention strategy proposed by the United States in the current international environment is inherently contradictory.

As tensions heightened, the United States' strategic focus expanded to include the broader implications of Japanese expansionism for regional stability and its own national interests. This strategic shift was evident in the Washington Naval Conference of 1921-1922, where the United States sought to limit Japanese naval power through diplomatic means, aiming to prevent an arms race and maintain a balance of power in the Pacific. Furthermore, the U.S. adopted a more proactive stance by fortifying its own military presence in the Pacific, including the Philippines and Guam, to counteract Japanese advances. These actions reflected a growing recognition of the interconnectedness of security concerns across the Asia-Pacific region. The United States also began to strengthen its alliances with other Western powers and regional actors, fostering cooperative security arrangements. Despite these efforts, the contradictions within U.S. policy—oscillating between cooperation and containment—highlighted the complexities of managing relations with an increasingly assertive Japan. This period set the stage for the eventual clash between the two nations, culminating in the Pacific War during World War II, which drastically reshaped the geopolitical landscape of Northeast Asia.

The anti-Soviet alliance jointly established by the United States and Japan requires cooperation between the two countries to be effective. However, if either party wavers, the alliance could collapse at any moment. Moreover, the United States mentions the need to contain Japan's further expansion in its Far East policy, which could lead to the deterioration of US-Japan relations, thereby resulting in the disintegration of the anti-Soviet alliance.^[22] Since the United States' power in the Far East region is far from being able to control Japan, it must rely on other countries to interfere simultaneously with both the Soviet Union and Japan. This also became one of the reasons for the subsequent shift in the United States' attitude towards the Korean issue.

After the end of World War I, one of the most direct outcomes was the decline of Europe and the rise of the United States and Japan. The United States replaced Britain as the world's largest creditor and capital-exporting nation, while also holding nearly 40% of the world's gold reserves. During the Paris Peace Conference and the Washington Conference, the United States convened meetings for small countries and the Second Conference of Small Nations respectively. After the conclusion of the Paris Peace Conference, the hopes of the Korean people for the major powers, including the United States, turned into disappointment and frustration. While the plan advocated surface-level principles of just and lasting peace and the right to national self-determination, its strategic objectives were geared towards countering the expansion of Soviet influence and creating conditions for the United States to become a hegemonic power. It did not help Korea to fully break free from Japanese colonial rule nor prevent major powers from sacrificing the territorial integrity and sovereignty of weaker nations for their own interests. Japan continued its "continental policy" at this time, further enhancing its political oppression and economic exploitation of Korea as it expanded its military operations on the Chinese mainland. To strengthen its wartime regime and maintain control over the territories it occupied in China, Japan intensified its political repression and economic exploitation in Korea. Japan enacted various laws such as the "Public Safety

Preservation Law" and the "Publishing Law" to brutally suppress and control the Korean people. However, this situation quickly changed with the advent of World War II.

The Intervention of Major Powers around Korea Peninsular before and after the Second World War

Before being drawn into the battlefields of the Pacific and Europe, the United States had always adhered to a policy of isolationism, primarily due to geopolitical considerations. On December 7, 1941, the day after Japan's surprise attack on the U.S. naval base at Pearl Harbor, Hawaii, the United States declared war on Japan, marking the beginning of the "Pacific War" between the two nations. The United States once again abandoned its long-standing isolationist policy due to the exigencies of war and adopted an "offshore balancing strategy," engaging in interventionist actions in European and Asian affairs^[23]. This shift aligned with the theoretical framework of an "interventionist strategy." The post-war economic recovery and reconstruction would take a considerable amount of time to materialize, so the immediate impact of post-war Europe on U.S. overseas interests was limited. Through post-war economic aid programs, the United States helped Europe rebuild its economy and began exerting comprehensive control over Western European countries by consolidating Western capitalism and political democracy. The success of the Marshall Plan enabled the United States to achieve its strategic goal of politically and economically integrating Western Europe into a new liberal international political and economic order.

While the United States implemented the Marshall Plan to integrate the economic and political order of Western European countries, the Soviet Union was also evolving Eastern European countries, including the Soviet zone in Germany, into Soviet-style states. As the war in the Pacific theater against Japan approached its end, the United States dropped an atomic bomb on Hiroshima, Japan, on August 6, 1945, and the Soviet Union abrogated the Soviet Japanese Neutrality Pact. However, due to the onset of the Cold War between the Soviet Union and the United States and the fragmentation of political forces on the Korean Peninsula, a unified and independent country did not emerge on the Korean Peninsula. Instead, with the support of the United States and the Soviet Union, the Republic of Korea and the Democratic People's Republic of Korea were respectively established in the south and north in August and September 1948.

According to the US-Soviet agreement, Japan surrendered to the United States and the Soviet Union on the respective sides of the 38th parallel in 1945. However, this artificially drawn line became the dividing line that split Korea into two parts, north and south. To this day, there exist two internationally recognized sovereign states on either side of the 38th parallel. The first hot war of the early Cold War period was initially a civil war between two countries on the Korean Peninsula, among the same people. However, due to the direct or indirect intervention of the United States and the Soviet Union, this war had already transcended the meaning of a civil war and evolved into an international conflict.

The Soviet Union and the United States respectively announced their withdrawal from Korea at the end of 1948 and on June 30, 1949. However, the tension on the Korean Peninsula did not ease significantly as a result. The situation on the Korean Peninsula remained in a state of instability, and the withdrawal of the two countries led to a power vacuum.^[24] The collapse of the unstable system

would inevitably lead to unavoidable conflicts because both North Korea and South Korea insisted that they were the only legitimate governments. From the spring of 1949 onwards, conflicts between the two countries near the 38th parallel continued. Ultimately, the Southern government's proposal for "Northern advancement for reunification" and the Northern government's proposal for "liberating the South" evolved into a serious military conflict on June 25, 1950.

Conclusion

From the late 19th century to the mid-20th century, the international relations surrounding the Korean Peninsula underwent several phases, including the tributary system, the Versailles-Washington system, and the bipolar Yalta system. The interventionist behaviors of Russia, Japan, and the United States towards the Korean Peninsula during the late 19th and early 20th centuries, as well as the reasons for the strategic conflicts among various countries during this period, can be analyzed. The paradigm of state behavior during this period was essentially a hegemonic imperialism system, where the formulation of international system rules was monopolized by imperialist countries. After the main territorial resources of the world were partitioned and the system of sovereign states had largely formed, the mode of annexation among the great powers transformed into a competitive mode.

During the period from the early 20th century to the mid-20th century, the forms of intervention by neighboring major powers in the Korean Peninsula also underwent adjustments. Japan's ambitions in East Asia remained unabated, and it intervened in and suppressed the Korean Peninsula more aggressively. The United States began to change its past "Monroe Doctrine" and intervened in the Korean Peninsula through relatively mild means such as economics and culture. The end of World War II had a significant impact on the geopolitical situation of the Korean Peninsula, with the United States and the Soviet Union becoming the major intervening powers. The withdrawal of the US and the USSR led to a power vacuum in the region, ultimately resulting in the outbreak of the Korean War.

Looking back at the history of conflicts among neighboring major powers over the Korean Peninsula in modern times, we can see that the main cause of all contradictions lies in the incompatible strategic goals and national interests of each country. Each country sought to maximize its national interests by all means, even resorting to war, based on a short-sighted perspective of protecting its own interests rather than considering the long-term perspective of protecting the interests of most countries or even future world peace. However, as the international system developed, various major powers also made changes in their intervention methods towards the Korean Peninsula in accordance with the rules of the international order at that time. Because there is an inseparable relationship between the international system and state behavior, changes in the international system inevitably led to adjustments in state behavior.

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Conflict of Interest

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Historical Traceability of the Chinese Nation Community and the Path of Its Modernization

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Abstract

The Chinese nation community, as a term frequently mentioned in the field of social sciences in recent years, originated in the Pre-Qin period, took its initial shape during the Qin, Han, Tang and Song dynasties, and was basically formed in the Yuan, Ming and Qing dynasties. It inherits the essence of outstanding traditional Chinese culture. Looking back at history, since the implementation of the reform and opening-up policy, under the leadership of the Communist Party of China, remarkable achievements have been made in the construction of the Chinese nation community. A wealth of important experiences and valuable ideas regarding the governance of ethnic affairs have been accumulated. From dealing with ethnic affairs in the early days of the founding of the People's Republic of China, to the socialized development of ethnic work since the reform and opening-up, then to the modernization of ethnic affairs governance, the path of governance with Chinese characteristics, and to strengthening the sense of community for the Chinese nation empowered by digital technology, we have been constantly moving forward on the path of the modernization construction of the Chinese nation community. Amid the profound changes unseen in a century, it is necessary to continuously promote the construction of the Chinese nation community from a holistic perspective, enhance cohesion, and ultimately realize the great rejuvenation of the Chinese nation.



Full Text Article



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Keywords: The Chinese Nation Community; Historical Process; Modernization Construction

Introduction

The historian Benedetto Croce put forward that the important ideas that have survived in the long course of history cannot be severed from the present reality. Instead, these ideas will integrate into reality in a new way and exert their efficacy. Based on this view, the histories of all countries and ethnic groups around the world serve as the bonds connecting the past and the present, providing the sources for the development of countries and ethnic groups. For the Chinese nation, the Chinese

nation community is rooted in the profound history of the Chinese nation and inherits the ideological essence of outstanding traditional Chinese culture, thus providing a powerful impetus for realizing the great rejuvenation of the Chinese nation.

Looking back on history, since the reform and opening-up, under the leadership of the Communist Party of China, remarkable achievements have been made in the construction of the Chinese nation community. A large number of important experiences and valuable ideas regarding the governance of ethnic affairs have been accumulated, and it has gradually embarked on the path of modernization. On the path of modernization, the Party and the state have introduced a series of measures and policies and adopted a comprehensive governance approach, shifting from government management to multi-party participation in society, with the aim of achieving common prosperity for all ethnic groups and strengthening the sense of community for the Chinese nation.

China's modernization construction model of the Chinese nation community is closely related to the history and experience of the Chinese nation. Therefore, from the perspective of historical narrative, this article traces the historical journey of the Chinese nation community in order to better understand the development logic of the Chinese nation community. And based on the ethnic governance model and precious experience with Chinese characteristics, it analyzes the modernization construction path of the Chinese nation community, consolidates the sense of the Chinese nation community, and provides relevant theoretical basis and practical reference for consistently promoting the construction practice of the Chinese nation community in the new era.

The proposition of the "Chinese nation community"

The Chinese nation community is a unified entity formed by the Chinese nation throughout its long historical journey. Nowadays, it refers to the diverse unity of the 56 ethnic groups in China, highlighting the state in which these 56 ethnic groups exist in the form of a community. The Chinese nation community itself has evolved over the long history of the Chinese nation. However, the specific term "Chinese nation community" was put forward in the academic circle relatively recently, and it didn't become a professional academic term until after the 18th National Congress of the Communist Party of China.

In the 1980s, some scholars analyzed the evolutionary forms of the Chinese nation community and believed that there were mainly two forms: war and peace. The term "Chinese nation community" began to become a relatively stable academic term in 2011, but at that time, it did not yet have a specific meaning. In May 2014, General Secretary Xi Jinping first officially mentioned the sense of the Chinese nation community at the Second Central Work Symposium on Xinjiang, which then attracted the attention of numerous scholars. In September of the same year, General Secretary Xi Jinping pointed out at the Central Conference on Ethnic Affairs that it was necessary to solidify the ideological foundation of the Chinese nation community. Since then, the "Chinese nation community" has been incorporated into the academic discourse system and endowed with rich political connotations, thus becoming an important academic concept. In recent years, scholars have carried out a large number of studies on issues such as strengthening the sense of the Chinese nation community and the construction of the Chinese nation community, and have achieved a series of results. As a result, the concept of the Chinese nation community has emerged more and

more frequently. In 2017, the 19th National Congress of the Communist Party of China was held, and the phrase "strengthening the sense of the Chinese nation community" was written into the Party Constitution. Since then, the concept of the Chinese nation community has become an important carrier for uniting people of all ethnic groups and strengthening the sense of the Chinese nation community.

Historical Traceability of the Chinese nation community

The Pre-Qin Period: Gestation

During the period of the "Three Sovereigns and Five Emperors" in ancient times, tribal communities bonded by blood ties came into being. There were frequent economic transactions and wars among different tribes, which not only expanded the living space of the tribes but also promoted exchanges and integrations among them. During the Xia, Shang, and Zhou Dynasties, the vassal states fought against each other. Small tribes were gradually annexed, and eventually, larger and more concentrated ethnic communities were formed, known as the Huaxia ethnic group. During this period, although the production methods, living habits, and ritual systems in the Central Plains region dominated by the Huaxia ethnic group were relatively advanced and there were certain differences from the surrounding ethnic groups, with the increasingly frequent economic exchanges, the interactions between the Huaxia ethnic group and the surrounding ethnic groups also became closer day by day. During the Spring and Autumn Period and the Warring States Period, the Huaxia ethnic group had gradually integrated with the surrounding ethnic groups. People from the surrounding ethnic groups continuously migrated to the Central Plains region and took the initiative to learn the culture, lifestyle, and rituals of the Huaxia ethnic group. Thus, with the Huaxia ethnic group as the core and the continuous integration of the surrounding ethnic groups, the embryonic form of the Chinese nation community was gestated.

The Period from the Qin and Han Dynasties to the Tang and Song Dynasties: Initial Formation

The Qin and Han dynasties opened up the path for the development of a unified multi-ethnic country in China. During this period, measures such as implementing imperial centralization, unifying weights and measures as well as scripts, and advocating the policy of "banning all other schools of thought and respecting only Confucianism" were carried out, which provided preconditions for the formation of the Chinese nation community. During the Western Han Dynasty, the Han Dynasty launched military campaigns against the Xiongnu in the north and sent envoys to the Western Regions. The living territory of the Chinese nation gradually expanded, which promoted economic and cultural exchanges between the Chinese nation and the surrounding ethnic groups. The mutual wars among different ethnic groups were precisely an important way for the formation of the Chinese nation community. As the Han Dynasty grew stronger, the terms "Han people" and "Han ethnic group" gradually replaced the previous designations for the people and ethnic groups in previous dynasties, and the name of the Han ethnic group was thus established. The Han ethnic group gradually became the core of the Chinese nation community and radiated outwards, embracing other ethnic groups and forming a big family of the Chinese nation with the

Han ethnic group at the center. During the Wei, Jin, and the Southern and Northern Dynasties, the political power changed hands many times, and wars and unrest were frequent. This drove the nomadic ethnic groups to move closer to the Han ethnic group. They took the initiative to learn Chinese culture, Huaxia rituals, and undergo the baptism of Confucian thought. During the Southern and Northern Dynasties, both the Han ethnic group and ethnic minorities regarded themselves as inheritors of Chinese culture, which also reflected from the side the recognition of China by various ethnic groups and was an important manifestation of the development of the Chinese nation community. During the Sui and Tang Dynasties, the political power tended to be stable and returned to the form of a unified empire, which promoted peaceful exchanges among different ethnic groups. The rulers of the Tang Dynasty were inclusive in their minds and believed that there was no essential difference between the Han people and ethnic minorities and that they were originally one family. They put forward the proposition of jointly governing the world. During the Northern and Southern Song Dynasties, contradictions between the Han ethnic group and ethnic minorities in the north continued. Thinkers began to replace the concept of grand unification with the concept of orthodoxy. However, the people of the Liao Dynasty believed that they had always belonged to the Chinese nation. Such differences in concepts were precisely important characteristics during the period of the division of the multi-ethnic country and were also the inevitable result of the feudal dynasties' efforts to maintain their rule. From the Qin and Han Dynasties to the Tang and Song Dynasties, the Chinese nation was constantly in a state of dispersion and connection, which was an important period for the formation of the Chinese nation community.

The Yuan, Ming and Qing Dynasties: Basically Formed

During the Yuan, Ming and Qing Dynasties, the situation of grand unification was restored. The rulers at that time recognized the existence of various ethnic groups, and the concept of the Chinese nation community gradually took shape. The Yuan Dynasty was a unified regime established by the Mongolian ethnic group. During the Yuan Dynasty, the rulers did not distinguish between the Han people and ethnic minorities, which reflected the concept of the Chinese nation community from the side. Meanwhile, the rulers of the Yuan Dynasty implemented the policy of multi-ethnic composition of officials, continuously expanded the territory, and promoted economic and cultural exchanges among different ethnic groups, which played an important role in ethnic integration. During the Ming Dynasty, the rulers emphasized that the Han people and ethnic minorities were one family, breaking the traditional view of opposition and recognizing the status of the Yuan Dynasty (the Mongolian ethnic group) after it entered and ruled the Central Plains. When the Ming Dynasty was replaced by the Qing Dynasty, many people held a negative attitude towards the Qing Dynasty established by the Manchu ethnic group. In this context, the rulers of the Qing Dynasty in successive generations continuously promoted the awakening of the consciousness of the Chinese nation community and gradually broke the shackles of the opposition between the Han people and ethnic minorities. Faced with the numerical superiority of the Han people, on the one hand, the rulers used political power to suppress, and on the other hand, they publicized the idea that the people of all ethnic groups were one family, blurring the boundaries among various ethnic groups. It can be said that the Qing Dynasty was a crucial period for facilitating the formation of the

Chinese nation community. During this period, the regions where people of all ethnic groups lived and carried out activities were basically the same as those today. Since then, the Chinese nation community has been basically formed. Throughout the long history, various ethnic groups influenced each other in wars, migrations and exchanges, breaking the original boundaries of geography, culture, language and so on. Eventually, an inseparable Chinese nation community was formed in the Qing Dynasty.

The Modernization Construction Path of the Chinese Nation Community

Looking back on history, since its founding, the Communist Party of China has always been concerned about the development of the Chinese nation community and has been committed to promoting its construction. During the construction process, the Communist Party of China has inherited and innovated the quintessential ideas in Chinese history, continuously accelerated the pace of independent exploration, accumulated a wealth of important experiences and valuable ideas regarding ethnic affairs governance, and gradually embarked on the path of modernization. On the path of modernization, the Communist Party of China has introduced a series of measures and policies, adopted a composite governance approach, shifting from government management to multi-party participation in society, with the aim of achieving common prosperity for all ethnic groups and strengthening the sense of community for the Chinese nation.

The Construction of Ethnic Affairs in the Early Days of New China

After the founding of China, under the leadership of the Communist Party of China, large-scale investigations into the history of ethnic minorities were carried out. Many ethnologists entered the living areas of ethnic minorities to record and sort out information on their humanities, history, languages, organizational structures and other aspects, and on this basis, identify ethnic identities. This investigation is of great significance to the cause of national unity in China. After each ethnic minority established its ethnic identity, it was able to achieve regional autonomy, enter socialism on an equal footing, and integrate into New China. In order to strengthen the cohesion among all ethnic groups, the Communist Party of China established ethnic colleges and universities to promote the connection between the country and various ethnic groups. From 1950 to 1952, the government organized visiting and inspection groups to extend greetings to the people of ethnic minorities, aiming to eliminate ethnic grudges and promote national unity.

The Socialized Development of Ethnic Work since the Reform and Opening - up

After the reform and opening - up, the socialist market - oriented economic system was established. On the one hand, it has greatly liberated social productive forces. Resources have been reasonably circulated and allocated. Economic and cultural exchanges have broken ethnic barriers, promoted in - depth exchanges among all ethnic groups, and contributed to the development of the Chinese nation community. On the other hand, the socialist market - oriented economic system has also brought relatively large social competitive pressure, giving rise to new problems in the governance of ethnic affairs. During this period, there emerged in the academic community the trend of thought that the government should reduce its participation and that society should develop independently. However, this trend of thought does not conform to the reality of Chinese society. With the improvement of the economic level, the general public's expectations for a better life have risen accordingly, and the spiritual and cultural demands have increased, requiring more new and

rich content products and services. Against this background, in some individual areas, there have been situations of weak grass - roots construction. Phenomena such as religious extremism have emerged, which have greatly affected national unity and social stability. This also reminds us from the side that China's socialist construction must be combined with the specific reality. To solve the above - mentioned problems, the "socialization of ethnic work" emerged as the times require, alleviating the crisis of the complication of ethnic affairs.

Modernization of ethnic affairs governance

The state and society in China should be in a relationship of mutual promotion and common strength. Since the 18th National Congress of the Communist Party of China, the government has proposed the modernization strategy of national governance. This is a goal put forward by the Party in response to the current situation of the rapid development of China's economy and the rising expectations of the people for a better life. The focus of governance modernization is to give play to the power of multiple social subjects, but the Party still plays a leading role. Therefore, it is necessary to continuously strengthen the organizational and leading role of the Party, and taking the leadership of the Party and the joint participation of multiple social subjects as an important feature of governance modernization.

In addition, as an important part of the modernization of national governance, ethnic affairs governance should also emphasize the combination of Party leadership and multiple subjects, strengthen the education of the "Five Identifications", promote the common language, etc. In ethnic minority areas, precise poverty alleviation and equalization of public services should be achieved, economic and cultural exchanges among all ethnic groups should be promoted, the socialization of ethnic work should be continuously promoted, the education of the sense of community of the Chinese nation should be strengthened, and ethnic cohesion should be strengthened throughout the whole society to promote national unity.

The governance path with Chinese characteristics promotes the construction of the Chinese nation community

Firstly, adhere to the people-centered approach. While focusing on economic development, attention should also be paid to the political demands of ethnic minorities. In the process of ethnic affairs governance in China, great importance has always been attached to the various development rights of ethnic minorities, and continuous efforts have been made to promote the modernization development process in ethnic minority areas. Through poverty alleviation and paired assistance, people of all ethnic groups can equally enjoy the resources and dividends of the country. From an individual perspective, people of ethnic minorities have rights such as the right to free development and competition. However, from an organizational perspective, the overall economic level of the social strata where most ethnic minority people are located is relatively low. And the government is unable to provide targeted assistance and support to these minority groups, resulting in the continuous marginalization of these groups and the inability to realize many of their rights. Therefore, composite governance has become crucial. Through composite governance, people of all ethnic groups can exercise the same rights and step onto the path of modernization together.

Secondly, commonality and diversity coexist. On the one hand, ensuring the cohesion and integrity of the Chinese nation is an important guarantee for realizing the great rejuvenation of the Chinese nation. On the other hand, embracing the differences among various ethnic groups can enhance the sense of belonging of all ethnic groups to the Chinese nation community. And the current prosperity and development of China's 56 ethnic groups have also verified the importance of the coexistence of commonality and diversity.

Thirdly, closely combine policies with practice. Since the founding of the People's Republic of China, the Communist Party of China has introduced a series of policies to support the economic development of all ethnic groups. Meanwhile, in the practice of building the Chinese nation community, the Communist Party of China has continuously accumulated experience and improved the level of ethnic affairs governance, making China's ethnic work both continuous and in line with the trend of modernization.

Digital empowerment helps to strengthen the sense of the Chinese nation community

An important manifestation of modernization is the rapid development of digital technology. Firstly, digital technology promotes the construction of integrated media platforms, enhancing the efficiency and level of information dissemination in ethnic minority areas. In terms of public opinion guidance, integrated media platforms can enrich the forms of information dissemination and better lead the ideology in the Internet world. In terms of livelihood services, integrated media platforms can meet the in-depth needs of people of all ethnic groups for spiritual and cultural content and drive the development of industries in ethnic minority areas, thus accelerating the pace of poverty alleviation. Secondly, with the help of digital technology, it is possible to strengthen the sense of presence in communication scenarios, promote the diversification of communication forms, conduct symbolic construction of the culture in ethnic minority areas, and enhance the sense of identity of ethnic minority areas with Chinese culture. In addition, through digital empowerment, ethnic minority areas can achieve a virtuous cycle of capital, technology and content, strengthen public opinion guidance, and establish connections and exchanges with the economic and cultural development of ethnic minority areas, thereby strengthening the sense of community for the Chinese nation.

Conclusion

The Chinese nation community is rooted in the profound history of the Chinese nation and inherits the ideological essence of outstanding traditional Chinese culture. Since the reform and opening - up, under the leadership of the Communist Party of China, the construction of the Chinese nation community has achieved great success, accumulated numerous important experiences and precious ideas regarding ethnic affairs governance, and has gradually embarked on the path of modernization. At present, in the context of the great changes unseen in a century, more attention needs to be paid to the precious experiences of the Communist Party of China in the modernization process of the Chinese nation community. From a holistic perspective, the construction of the Chinese nation community should be continuously promoted. On the one hand, ethnic issues should be resolved with the concept of complexity based on the overall national strategic layout. On the other hand, ethnic integration in history, culture and other aspects should be carried out from the perspective of the community as a whole, thereby enhancing the national identity of all ethnic groups. In addition, the leader in resolving ethnic issues in China has always been the Communist Party. In the construction of the Chinese nation community, the leadership of the Communist Party of China should be adhered to, multiple social subjects should be mobilized to participate, and the construction path with Chinese characteristics should be followed to enhance national cohesion and ultimately achieve the great rejuvenation of the Chinese nation.

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Conflict of Interest

The authors declare no conflict of interest.

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IT Business Model: Case Study of TikTok

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Abstract

From the late 19th century to the mid-20th century, the geostrategic significance of the Korean Peninsula evolved, becoming a focal point for major powers' strategic interests. This paper analyzes the intervention behaviors of Russia, China, Japan, and the United States from the perspective of "intervention theory." Initially, China shifted from a passive to an active intervention policy to counter Japan's growing influence in Korea, especially after the First Sino-Japanese War. As China weakened, other powers, including Russia, the U.S., and Germany, increased their impact. In the early to mid-20th century, Japan's ambitions led to more aggressive interventions. The United States, departing from its Monroe Doctrine, used economic and cultural means to influence the region. After World War II, the U.S. and Soviet Union emerged as the main powers intervening, leading to a power vacuum and the outbreak of the Korean War. This historical analysis through intervention theory offers new insights into contemporary Korean issues.



Full Text Article



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Keywords: information technology (IT); IT business model; TikTok; Osterwalder framework

Introduction

With the swift development of information technology (IT) and the appearance of the fast-paced lifestyle, the era of fragmentation has arrived (Hu, 2020). Modern people have no patience to read long papers or watch long videos because they are now faced with greater pressure than the past in this highly competitive society and there is crazy tempo of life. That means most people prefer to spend small moments of time entertaining. In this way, the form of short videos which delivers information in a concise but rich format is more likely to be accepted by the public. Short videos are the products in the information age which have become the mainstream on social media platforms with the characteristic of fast spread and high output (Xu et al., 2020). On the other hand, the outbreak of Covid-19 has meant an abrupt change in social media and pushes the development of short videos because of more free time for people, and thus there is an increasing number of short video users (Liang, 2021). That definitely brings great chance for short video companies such as TikTok, Instagram and YouTube to make profit. In fact, before short videos became widespread,

those video platforms provided users with different length of videos including short videos, but long-form videos still played a leading role for a long time (Wu, 2021).

TikTok is a platform of short videos and also uses a video function for live streaming with the idea of recording life with music short videos (Peng, 2021). It has been widely used in large amounts of countries worldwide, and has 75 language versions now (Kibet, 2021). In the current social media platforms, TikTok is one of the fastest growing platform in the world which was launched by the Chinese company ByteDance in 2016. Its downloads increased to its highest points at over 313.5 million in the first quarter of 2020 (Ceci, 2024). IT services of TikTok enable users to create and share short videos and broadcast live video content in real time. The key technology of TikTok is AI algorithms which can recommend personalized content to users based on their interests and interactions, which will be introduced in next section. Moreover, TikTok provides users with e-commerce, which means that users can purchase products from short videos, livestreaming or TikTok shop. Overall, IT business model is the key to the successful business of TikTok. This essay analyses TikTok's IT business model based on the Osterwalder framework in order to have a better understanding of its concepts, theories and ITs.

Literature and Concepts

Artificial Intelligence including algorithms and machine learning is the core competency of TikTok, and also directly reflects the main creative idea of the TikTok, which is key to the company's success (Feldkamp, 2021; Ma & Hu, 2021). The core technology of TikTok is 'Computer Vision', which is implemented by the App Toutiao to provide a personalized and engaging experience for users (Lan, 2022). To be more specific, users do not have to think or search for the content of short videos they like with the algorithms of Computer Vision which can queue up videos for them automatically based on the user data. Big data technologies are used to process and analyse data in real time. TikTok collects the data of users including their likes, comments, shares and browsing history so as to provide more videos they might like. These data are typically stored in databases. In addition, there are several types of video content which people can choose as their preference when they first download TikTok, which is customization option while Toutiao can also consolidate and organize data of users as time goes on as mentioned before.

In terms of machine learning, algorithms continuously learn user interactions and then improve the accuracy of content recommendations over time, which ensures that 'For You feed', the default landing page for users (Jaipong, 2023), is accurate and adapts to user preferences. 'For You feed' not only provides a personalized recommendation system but also the function of 'Hashtags' and 'Challenges'. Challenges are initiated by the platform, creators and brands with the contents of dance, songs, comedy and storytelling to increase the visibility and reach of their videos. Challengers can use hashtags to categorize and label their content in order to attract those who are more interested in that specific area.

Internationalization refers that a company not just develops in the local market but moves into foreign markets (Dominguez, 2018). As for TikTok, its internationalization can be shown in following ways. Section 1 has mentioned that TikTok has 75 language versions now. That means users can choose their preferred language for the interface, menus and other text elements. Moreover, short videos in different countries show different contents because of cultures and

regions difference. On the one hand, people enjoy videos which are more related to their countries where they live since they pay more attention on things and people around them most of the time. ‘Same City Videos’ is a specialized function provided by TikTok and allows users to watch videos created by people who have the same location. On the other hand, people from different countries might have different interests and thus TikTok recommends them videos accordingly. For instance, Korean and Japanese love street dance videos while European users are more interested in extreme sports. In addition, TikTok collaborates with brands all over the world to attract more people to join it such as clothing brands like Li Ning from China, cosmetics brands like Innisfree from Korea and electronics brands like Apple Inc. from America.

Another key concept of TikTok is ‘Modularity’, a design principle, which refers that a complex system can be divided into different parts and then integrate the parts into a coherent whole in order to get a more convenient and structured design (Brusoni et al., 2023). In terms of a video in TikTok, it has two main modules: audio module and video module (Mhalla et al., 2020). To be more specific of video module, video editing is divided into small modules such as adjusting colour levels and brightness and adding filters, stickers and words. When creating a video, the internal program decodes the video content for uploading. It combines all small modules to a complete video before releasing the video. All modules work together so as to create more perfect videos which meet users’ requirements.

TikTok provides two types of videos: recorded video and live video. It transmits the information of videos to the specific database through the Internet so that the videos can be implemented on the application layer (Mhalla et al., 2020). The basic difference between those two types of videos is the form of data storing. Recorded video is stored as large amounts of images while live video stores data information in the form of a streaming video. In addition, most recorded videos are recommended to reduce file size but still preserving visual quality. However, the data of live video should be processed in real time, which means that update of the special effects and real time interaction between creators and viewers make it hard to compress the data.

Section 3 will introduce Osterwalder framework as TikTok’s IT Business Model. The Osterwalder business model is a strategic management framework which provides a structured way to analyse how value will be delivered, experienced and acquired in a company (Osterwalder & Euchner, 2019; Richardson, 2008). It helps a company to visualize the business forms in a structured manner in order to adapt the core business strategies and best support the business goals so as to enhance the core competitiveness and improve business performance of the company. Osterwalder business model offers nine key components in the form of graphs: key partners, key activities, key resources, value proposition, customer relationship, channels, customer segment, cost structure and revenue streams, which provides a comprehensive overview of how a company operates value.

Analysis

This section analyses TikTok’s IT Business Model by using Osterwalder framework as shown below with the aim of having a better understanding of what and how value will be created, delivered and captured.

Table 1: TikTok’s Business Model based on Osterwalder framework
 (Source: developed from Apptunix, 2022 and Peng, 2021)

Key Partners Celebrities and other influencers Companies of fashion, food, beauty and travel Advertising partners (social media cites like music app and Instagram) Technology partners Local government	Key Activities Video recommendations Video making Live streaming	Value Proposition Entertainment Fragmentation Friend making Personal satisfaction (fame, life record, pursuit of beauty) Accessibility Globalization	Customer Relationship Mutual benefit: Precise recommendations Recognition and traffic Feedback mechanisms	Customer Segment People in both urban and rural areas New generation
	Key Resources Technology (Algorithms and Artificial Intelligence) Copyright of music Human resource		Channels Mobile App Website Celebrity effect Advertising	
Cost Structure Technology costs Music copyright Signed celebrities Staffing costs		Revenue Streams Advertising fee Live streaming E-commerce cooperation		

The key partners of a company are key to business success since they can provide support from every aspect to the company. The key partnerships that TikTok builds with celebrities and other influencers around the world are central not only to the success of TikTok but also to the possibilities of realization of short videos. Section 1 has mentioned that music is a key element of TikTok’s creating concepts and thus TikTok cooperates with singers and artists. In this way, TikTok can get permission for more songs so as to provide users with more options of audios to create short videos and more activities such as music-related challenges. Moreover, cooperating with brands of fashion, food, beauty and travel and advertisers of social media cites can attract the visitors who are interested in those areas to use the platform. Those companies also offer TikTok good ideas for designing new and creative activities. For instance, the platform can produce the short videos of makeup tutorials by collaborating with MAC cosmetics. As for social media sites, TikTok cooperates with Instagram by advertising, which means that it has opportunities to reach the users from Instagram (Haenlein et al., 2020). In addition, technology companies are crucial to the partnership of TikTok since the development and expansion of TikTok cannot last long without sophisticated technologies including video editing, cloud computing, data management and augmented reality. TikTok also works closely with local governments to ensure that it complies with local laws and community standards which are related to its operations such as data protection

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law. Overall, those key partners enhance the competitiveness of TikTok and contribute to its development in the highly competitive social media market.

There are three key activities of TikTok to make its business model work. On the one hand, TikTok recommends personalized content of short videos to users based on their interests to retain users as much as possible. On the other hand, the platform of TikTok makes sure that videos from them run smoothly. As for short videos, TikTok enables users to create, watch and share short videos, which should ensure a positive user experience on its platform. In terms of live streaming, TikTok allows users to access TikTok live and start broadcasting live to their followers on the platform, and thus TikTok has the responsibility to ensure the security broadcast and the synchronization in every signal.

The key resources of TikTok are strategic assets which support its activities. The technology resources are necessary for TikTok including algorithms and Artificial Intelligence which have mentioned in section 2. To be more specific, the recommendation system which is achieved by algorithms based on the interest of users is a key resource to build users personal engagement with the platform (Peng, 2021). In addition, Audio is a key component of TikTok, which has been mentioned in section 1. That means the copyright of music plays an important role in the operation of TikTok. The platform provides users with different types of music for creating different short videos such as videos of dancing and travelling. Human resources including engineers, designers, content moderators, business professionals and customer support teams are also key resources for managing operations of the TikTok platform and delivering value to its users.

Nowadays, almost all modern people lead a hectic life and thus they are willing for a way of entertainment which is not only relaxing but also time-saving. TikTok is fully consistent with their needs of entertainment and fragmented time which are the main value proposition (Jaipong, 2023). In TikTok, users can watch interesting and relaxing short videos and share them to their friends so as to relieve stress and gain happiness, and they can also unleash their creativity by creating their own short videos to express themselves through singing, dancing and storytelling. In addition, there is always the possibility of making new friends who have similar interests in the comment section of videos (Yao, 2021). TikTok also provides users a sense of personal satisfaction and achievement including fame, life record and pursuit of beauty. For instance, users can use stickers and templates of audio and video to make their videos lively so as to satisfy themselves. Moreover, although most users are currently young people, TikTok is available to all age groups and people from both urban and rural areas because of the user-friendly interface and intuitive features, which indicates its accessibility. As for globalization, TikTok aims to reach customers all over the world to share their creativities, and it has been used in more than 75 countries which has been mentioned in section 1.

TikTok aims to foster a highly interactive and engaging environment for customers to maintain a mutual, reliable and long-term relationship between the company and the customers (Jaipong, 2023). TikTok has a precise recommendation system which queues up great and funny short videos for users, which can best match the interests of users in order to deliver a good customer experience. Meanwhile, users like celebrities and influencers can provide exposure to the platform so that TikTok can attract more advertisers to invest in it. By winning high recognition from users, TikTok is also able to maximize the market's share. Moreover, users can provide feedbacks and suggestions through forms or surveys in the platform, which helps TikTok to know more about user preferences and improving direction.

In order to effectively engage with users and keep long term relationship with them, TikTok uses different channels to reach its users and deliver its services. The mobile app is the main channel for TikTok which is easy to download and is available on both iOS and Android devices. Users can also access the platform on the website directly. That means it is not necessary to download the app, which provides great convenience for those who want to try out the platform first before downloading. In addition, by cooperating with celebrities and other influencers, TikTok can attract more potential users including fans and people who admire those influencers. Social media sites can also be a good channel since they will put the advertisement of TikTok on their platform if they collaborate with TikTok so as to attract more people to join TikTok.

TikTok can be accessed by all citizens from both urban and rural areas. It has gained significant popularity among teenagers and young adults who use TikTok as a platform for self-expression, entertainment and sociability, which indicates that young people seem to use TikTok more frequently than old people. However, TikTok also attracts a sizable audience of adults who prefer to engage with educational and meaningful contents including finance, career advice and mental health.

By managing its costs effectively, TikTok can operate its business model efficiently and deliver value to its users. TikTok's costs come from its key resources in general. TikTok invests most in technology which is important in the IT business model. That means the platform should focus more on servers, data processing and cloud services to support its operations. TikTok also allocates large amounts of funds for music copyright and signed celebrities including licensing fees for music, video content and intellectual property rights (Peng, 2021). This is because it aims to be a music short video platform which has been mentioned in section 1. Moreover, it is necessary for TikTok to spend money on staffing since the company has to pay wages and provide benefits for its staff such as engineers, marketers and accountants.

It is important for TikTok to have enough money so as to support TikTok's business model and drive its long-term success and growth. For TikTok, there are three main ways to generate revenue. TikTok offers advertising opportunities to brands to promote their products. It can charge fees for displaying advertising on its platform. In terms of live streaming, TikTok charges live streamers a small percentage of their income for using the platform. It has a virtual currency system in which real money can be turned into virtual currencies and then to virtual gifts so that viewers can give virtual gifts to the streamers they like (Mhalla et al., 2020). In this way, streamers receive a share of the revenue generated from virtual gift purchases while TikTok takes a cut as well. In addition, TikTok earns revenue by cooperating with e-commerce platforms and taking a commission from sales. TikTok introduced a way of shopping in the platform in 2019, which is by clicking the button in a video below to jump to an e-commerce platform (Bailey, 2020). That means users can purchase products indirectly through TikTok, which is a creative way to gain revenue for the platform.

Discussion and Conclusion

The key to success of TikTok is the IT business model which supports its business operations and value delivery. This study sets out to analyse TikTok's IT business model with its concepts, theories and ITs based on the Osterwalder framework. Nowadays, there is an increasing number of modern people who are willing to find a easy way for relaxing and entertaining, and TikTok can meet their

expectations whose value proposition is to create a strong and lavish music short video community for people of all ages. Customer relationship plays a vital role in the success of business of TikTok. On the one hand, TikTok collects ideas and suggestions from its users with the aim of being a trustworthy and user-friendly platform. On the other hand, it cooperates with influencers and brands in order to increase its customer base.

The key resources of TikTok indicate the power of technology including algorithms and Artificial Intelligence which is to recommend personalized content to users based on their interests, which is supported by the platform including the app and the website. Therefore, the maintenance of the platform including servers and databases is an expensive part in the cost structure. It is also important to invest in the resources of music copyright because of the company's philosophy which is to build a music short video community. That means TikTok should collaborate with music companies as much as possible. Although the cost of TikTok is high, the revenue stream is stable. TikTok can get huge revenue from video creation, live streaming and e-commerce, which ensures its ability to extend into more markets globally. Overall, making full use of IT business model helps TikTok to adjust business strategies and enhance operational efficiency so as to create more value and sustain competitiveness in highly competitive markets.

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Conflict of Interest

The authors declare no conflict of interest.

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Analysis of Consumer Behavior Psychology of Zhecheng Chili with SICAS Model

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Abstract

In 2024, China has proposed to accelerate the construction of a strong agricultural country, pay close attention to stable production and supply of important agricultural products, and promote the coordinated development of rural revitalization. As an important agricultural product that makes the county prosperous and the people rich in Zhecheng County, Chili pepper is an important guarantee for Zhecheng County to achieve poverty alleviation and rural revitalization. Through analyzing consumer behavior towards Zhecheng pepper, it was found that consumers have a low perception level and low interest in buying. To address these issues, this study employs the SICAS consumer behavior theory model and proposes targeted recommendations, which will promote the high-quality and sustainable development of the Chili agricultural products in Zhecheng County. Additionally, this study can provide reference for the development of other unique agricultural products industries in different regions.



Full Text Article



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Keywords: Chili; SICAS Theory; Rural Revitalization; Psychology of Consumer Behavior

Introduction

The 2024 No. 1 Central Document in China emphasizes the urgency of ensuring the stable production and supply of food and important agricultural products, consolidating the achievements of poverty alleviation, and expanding avenues for farmers to increase income and wealth. China has stressed that a strong country must first have a strong agricultural sector; the strength of a nation is directly tied to its agricultural prowess, and a strong agricultural nation is the foundation of a modern socialist powerhouse. Advancing agricultural modernization is a necessary requirement for high-quality development. Zhecheng County, a national-level impoverished county, relies heavily on chili peppers as an important agricultural product for poverty alleviation and increasing farmers'

wealth. The chili pepper industry in Zhecheng County has become a characteristic agricultural industry that enriches the people and strengthens the county. Zhecheng Chili have received honors such as the "National Geographic Indication Trademark" and "National Geographic Indication Protected Product", ranking 65th in the Top 100 Brand List of National Geographic Indications with a brand value of up to 4.337 billion yuan (Mingyang, 2020). In recent years, Zhecheng County has taken chili peppers as the development object of the characteristic agricultural product industry, actively explored the resource advantages of traditional chili pepper production areas and promoted its innovation in market competitiveness. This has further stimulated agricultural enterprises in Zhecheng County to practice their sense of responsibility and mission to "revitalize the countryside and accelerate the high-quality development of agriculture and rural areas". It also provides valuable references for the high-quality development of characteristic agricultural product industries in other regions.

Chili pepper is a significant agricultural commodity; enhancing its yield and marketability contributes to income generation, employment opportunities, and food security enhancement for a substantial portion of rural households. Optimizing chili pepper market strategies is a prominent research topic among academics and industry professionals both domestically and internationally. Wosene employed a probabilistic modeling approach, Minimum Viable Product (MVP), to analyze the determinants influencing chili pepper market channel choices in the Wonberma district of Ethiopia (Wosene, 2018). Lillywhite, through a comprehensive review of existing U.S. chili pepper trade data and consumer surveys, proposed recommendations to bolster U.S. chili pepper production and sales (Lillywhite, 2021). Hou identified a deficiency in chili pepper seed by-product processing enterprises in Henan Province, China, indicating an inability to meet market demands (Hou, 2020). Zhang suggested that the chili pepper industry in Hebei Province should prioritize the cultivation of superior chili pepper varieties and enhance the chili pepper value chain (Zhang, 2021). Ren highlighted the low levels of standardization and branding in Yunnan Province's chili pepper processing, hindering the development of influential and reputable processed product brands (Ren, 2022). Cui observed that despite possessing exceptional quality, Xinjiang chili peppers face challenges due to insufficient integration of industry resources and uncoordinated processing and sales, resulting in a suboptimal price-quality relationship (Cui, 2022).

The study of consumer behavior is foundational to marketing decision-making and the formulation of marketing strategies. Arenas mentioned that analyzing the factors influencing consumer behavior aids in enhancing corporate competitiveness (Arenas, 2019). Ahn investigated the determinants of consumer behavior during the food delivery process through online survey data (Ahn, 2022). Huang stated that marketing should satisfy consumer needs from the perspective of the consumers (Huang, 2021). Ruan used multiple linear regression to discover that both marketing stimuli and environmental stimuli in external influences can significantly and positively affect consumers' perceived benefits (Ruan, 2022). Li pointed out that reinforcing consumer behavioral intentions is a focal point for agricultural enterprises currently, and he proposed suggestions regarding consumer perceived value, consumer satisfaction strategies, and consumer behavioral intentions (Li, 2022). Yang explored the corporate social marketing model based on the SICAS model (Yang, 2011). Yang described the evolution of consumer patterns and marketing countermeasures, emphasizing the application significance of SICAS in the marketing domain (Yang, 2020).

In summary, scholars have conducted extensive literature research surrounding capsicum marketing strategies. However, few have analyzed and proposed corresponding optimizations for capsicum marketing strategies from the perspective of consumer behavior. Research into consumer behavior can assist agricultural product operators in formulating more precise marketing strategies, especially the SICAS consumer behavior theoretical model, which, due to the development of the internet, holds substantial practical significance for optimizing the marketing strategies of agricultural products like capsicum. Therefore, it is both necessary and meaningful for this paper to utilize the SICAS consumer behavior model to optimize the marketing strategy for capsicum in Zhecheng.

SICAS Theoretical Model

Consumer behavior denotes the psychological tendencies exhibited by consumers during the acquisition and utilization of goods and services. A comprehensive understanding of consumer needs, preferences, and purchasing decision-making processes allows enterprises to develop targeted products and services, and to strategize more effective marketing tactics, thereby enhancing their market competitiveness. Research on consumer behavior also aids enterprises in deciphering consumer psychological states, purchasing intentions, and habitual behaviors, optimizing product design and improving product quality. Moreover, the precise identification of target customers and the development of more efficient marketing strategies can enhance marketing efficiency and effectiveness (Qi, 2023).

The SICAS (Sense-Interest & Interactive-Connect & Communicate-Action-Share) theoretical model, a third-generation consumer behavior model, is a product birthed from developments in mobile internet. The core driving force of the SICAS model hinges on connected dialogue, rather than broadcast-style advertisement marketing. It not only relates to social networking, but also corresponds to the behavior model of consumers in the context of Internet+ and digitization. The SICAS model evolved from AIDMA (Attention-Interest-Desire-Memory-Action) to AISAS (Attention-Interest-Search-Action-Share), then from AISAS to SICAS. In the SICAS theoretical model, Sense refers to the dynamic perception process formed by consumers through social media platforms. Consumers are no longer passively receiving product information from companies and can actively participate in discussions and share their usage experience on social media, shaping their perceptions and understandings of products and brands. Interest & Interactive stems from diversified marketing methods used by companies to stimulate consumers' interest in their products and maintain their attention. With precise market positioning and personalized marketing strategies, companies can attract consumer interest and interaction, prompting consumers to actively participate and engage with the company. Connect & Communicate involves companies connecting all communication channels used by consumers, ensuring timely communication with consumers through social media, online customer service, or other channels to promptly address their inquiries, feedback, and needs, thereby establishing a good communication and trust relationship. Action refers to consumers' purchasing behaviors occurring within various channels, where companies need to record and organize these behaviors to understand their preferences and behavior patterns and make corresponding adjustments and optimizations to provide a better purchasing experience. Share denotes consumers' willingness to share their experiences with excellent products, attracting

more consumers through word-of-mouth marketing. In the era of social media, the influence of consumers' sharing and recommendations is substantial. Companies can stimulate consumers' desire to share experiences by providing high-quality products and a pleasant purchasing experience, thereby expanding the product's influence and market share (Meng, 2023).

Current Analysis of Consumer Behavior Psychology

Foster industry leaders to elevate industrialization levels. Zhecheng County has nurtured 560 new type of chili pepper farming entities, 16 high-quality seed breeding leading enterprises, and developed over 800 superior varieties. It has cultivated 26 agricultural industrialization leading enterprises such as Wangxianlou, Lade Fresh, Chunhai chili Pepper, and Red Cube, and actively cooperated with more than 10 chili pepper deep-processing enterprises such as Chongqing Red Sun and Hanbang Spicy Source, to fully enhance the industrialization level of Zhecheng Chili peppers.

Leverage the Internet to strengthen industry influence. Large-scale events such as the 15th National Chili Pepper Industry Development Conference were grandly held in Zhecheng. The Zhecheng Chili pepper industry has made its brand more well-known by releasing bulk Zhecheng media news and industry media news, and effectively combining it with online promotion, thereby enhancing the influence of the Zhecheng Chili pepper industry to a certain extent.

This questionnaire primarily targets the main consumer group of Zhecheng Chili peppers - consumers in the Henan region.

The survey questionnaire is designed into two parts: the first part includes the basic information of the respondent, the second part is designed into five dimensions, collecting respondents' feelings about brand marketing activities. It refers to consumer satisfaction survey methods, using the international satisfaction percentage general rule to assign values to options: The questionnaire options are divided into 1-5 degrees from low to high, with "1" assigned 0 points, "2" assigned 30 points, "3" assigned 60 points, "4" assigned 80 points, "5" assigned 100 points. Each element, each aspect, and the total score of the SICAS model are calculated using the weighted scoring method.

Assuming the total number of people is R , the number of persons in each option is R_i , ($i=1,2,\dots,5$), the score of a single element x_i is:

$$x_i = (100 \times R_1 + 80 \times R_2 + 60 \times R_3 + 30 \times R_4 + 0 \times R_5) / R \quad (1)$$

the (S/I/C/A/S) score y_i is:

$$y_i = \frac{\sum_{i=1}^n x_i}{n} \quad (n = 2, 3, \dots) \quad (2)$$

the SICAS model score z is:

$$z = \frac{\sum_{i=1}^5 y_i}{5} \quad (3)$$

To further evaluate the overall effects of each element, each aspect, and the SICAS model, the scores are divided into five levels, namely excellent: 90-100; good: 80-89; medium: 70-79; pass: 60-69; fail: 0-59.

Measurement of the SICAS Model for Zhecheng Chili Pepper Brand

This questionnaire survey was conducted in paper form and the questionnaire statistics were conducted with professional software. A total of 360 questionnaires were collected, 11 invalid questionnaires were eliminated, and 349 valid questionnaires were collected, with a questionnaire efficiency rate of 97%.

The survey on the perception of the effectiveness of the Zhecheng Chili pepper marketing strategy is designed according to the SICAS theoretical model, mainly divided into 5 dimensions and 13 elements. The statistical analysis of the survey data for this part yielded the following results (see Table 1).

Table 1 The content and score of Zhecheng Chili pepper consumer behavior questionnaire

Dimension	Details	Score x_i	Total scores y_i
Sense	Zhecheng Chili has a certain popularity in your area	70.79	70.53
	You trust in the brands associated with Zhecheng Chili	70.67	
	You think highly of the quality of Zhecheng Chili	70.02	
Interest & Interactive	You often discuss Zhecheng Chili with your friends	58.26	60.73
	You approve of Zhecheng Chili's marketing campaign	63.51	
	You often pay attention to information about Zhecheng Chili	60.42	
Connect & Communicate	You will participate in the the discussion topics of Zhecheng Chili Marketing Campaign.	68.74	68.03
	Zhecheng Chili related businesses inquire about your experience	67.32	
Action	you think Zhecheng Chili related products are good value for money	71.58	72.19
	You are a frequent buyer of Zhecheng Chili related products	73.02	
	You are very satisfied with your consumer experience of Zhecheng Chili products	71.95	
Share	Would you like to recommend Zhecheng Chili products to your friends?	66.25	65.98
	Would you like to share and retweet information about Zhecheng Chili?	65.71	
SICAS scores	——	——	67.49
z			

As can be seen from the statistical table: The S brand perception scored 70.53, ranking as medium; the overall I interest score was 60.73, barely passing; the C interactive communication score was 68.03, ranking as pass; the A product purchase score was 72.19, ranking as medium; the S sharing score was 65.98, ranking as pass.

After measuring the five aspects of the SICAS model for the Zhecheng Chili pepper brand, the overall SICAS score was 67.49, ranking as pass, but the scores in each area were not evenly distributed. The highest score was the product purchase dimension with 72.19, ranking as medium, and the lowest score was the interest dimension with 60.73, barely passing. The above results indicate that the brand's marketing activities effectiveness is not good, especially in the aspects of interactive communication, sharing, and interest, there is still a lot of room for improvement.

Due to the limited budget of this study, it is not feasible to afford the costs, time, and human resources required for extensive reliability and validity analyses. Moreover, the focus of this study is to explore the relationship between consumer behavior and marketing effectiveness, rather than conducting an in-depth analysis of the nature of the measurement tools. Therefore, in this scenario, conducting reliability and validity analyses is not the primary focus of the research. Consequently, existing literature and research models are chosen to support the reliability and validity of the measurement tools used. (Wang, 2023)

Consumer Behavioral Problems in the Chili Industry

It is evident that the marketing model requires enhancement. The current marketing of Zhecheng Chili pepper is still dominated by the traditional mode, with competitive factors focusing on taste, price, and other factors. It is evident that the product brand, quality, and origin, among other key information, cannot be effectively transferred to consumers through the Internet. This is due to a lack of guidance and publicity, which in turn affects consumer awareness and confidence in Zhecheng Chili pepper products. Consequently, consumers tend to associate Chili peppers with larger, more well-known brands, such as Chongqing and Hunan Chili peppers, rather than with a smaller, lesser-known brand from Shangqiu City, Henan Province.

The link between interest stimulation and the product in question is relatively weak. The traditional marketing model has constrained the potential of Zhecheng Chili pepper, which has not only been used as a single marketing tool but also lacks the capacity to stimulate consumer interest and interaction with network media. For instance, the "net red card place" Zhecheng Chili characteristics of the town, despite the initial investment of significant resources, and the utilization of various Internet media platforms, including jittery voice, to disseminate information, has not generated a high level of interest. Furthermore, the enterprises related to Zhecheng Chili pepper lack detailed product descriptions. While the WeChat public number "Zhecheng Chili red" provides a daily market introduction, most consumers face difficulties in making accurate purchasing decisions due to the vast variety of Chili peppers available. This can lead to consumer frustration and a decline in interest in purchasing Zhecheng Chili peppers.

It is not possible to utilize the available traffic to establish a connection with consumers. Upon opening *TikTok*, one may search for short videos released by leading enterprises of Zhecheng Chili. It will be observed that commodity links rarely appear below the video. For instance, a food company in Zhecheng County has released numerous processing videos of Zhecheng Chili, as well as some manufactured products of Zhecheng Chili. However, none of these videos include a link to the relevant commodities, either at the bottom of the video or in the comment section. This is even though such links could potentially attract a high number of likes, thereby increasing the visibility of the commodities and the business in question. It is evident that this opportunity has not been

fully exploited, which hinders the connection between the commodities and the consumers.

The purchase channels are relatively straightforward. The Zhecheng Chili industry is currently in the developmental stage. Its production capacity and sales scale are insufficient to meet the needs of the large-scale consumer market. Furthermore, there is a paucity of evidence of Zhecheng Chili on e-commerce platforms. Despite being a specialty of Zhecheng County, the search engine feedback results are predominantly for "Zhecheng chicken claw twist". This is indicative of a lack of publicity and visibility on the e-commerce platform. Consequently, a single channel is insufficient to meet the needs of many consumers. The Zhecheng Chili, despite its popularity, has not received sufficient exposure on the e-commerce platform. A single channel is inadequate to meet the diverse needs of consumers, which may affect the strength of purchases.

The willingness of consumers to share information is not particularly strong. The extent of information sharing and communication channels among consumers is limited, and the corresponding incentives for sharing are also insufficient. Consequently, consumers cannot gain benefits from sharing information related to Zhecheng Chili products. This, in turn, leads to insufficient incentives for consumers to share the information in the first place.

Optimization Suggestions for Marketing of Chili Industry

It is recommended that the flow be fully exploited possible. Zhecheng Chili should seize the annual "Chinese farmers harvest festival," capitalizing on the advantageous traffic patterns to enhance the exposure of Zhecheng Chili in the minds of consumers. This will deepen the degree of consumer perception of the brand of Zhecheng Chili. Furthermore, enterprises related to Zhecheng Chili can leverage microblogging topics and publicity to assist farmers, thereby increasing consumer awareness of Zhecheng Chili.

The multifaceted and efficient use of media platforms can moderately guide consumers and enhance the degree of perception. The cultivation of leading enterprises in the province and municipality of Zhecheng County has resulted in the emergence of 26 leading enterprises. These enterprises serve as a significant driving force in the promotion of the brand awareness of Zhecheng Chili pepper. It is therefore imperative that they utilize the major Internet social media platforms to create their own traffic advantage and enhance the degree of Zhecheng Chili pepper perception in the minds of consumers. In addition, enterprises should also make optimal use of Internet media platforms to enhance the quality of video content and release relevant content on a regular basis. For instance, the use of Chili pepper is not only a common culinary ingredient, but also an important traditional Chinese medicine. It has been used to treat a range of ailments, including stomach cold and stagnant qi, vomiting, dysentery, rheumatism pain, and other diseases. Zhecheng Chili pepper, for instance, has been used to treat stomach ailments. It is possible for enterprises related to the use of chili pepper to utilize the Internet to moderate consumer guidance, thereby increasing consumer awareness of the use of chili pepper. Furthermore, the high quality of the video content can influence consumer preference, which may subsequently result in the implementation of purchasing behavior.

It is necessary to stimulate consumer interest. Zhecheng Chili-related enterprises may benefit from capitalizing on the influx of major festivals or events to align with the interest stimulation point of Zhecheng Chili consumers. It can be observed that people tend to prefer certain lively

scenes whenever major festivals or events commence. This is because such events arouse the interest of a significant number of people, who then search for and click on various online content. This presents an opportunity for Zhecheng Chili pepper-related enterprises to connect their products with these festivals or events, thus creating a positive association in the minds of consumers. It is necessary to create a sense of presence in the minds of consumers.

It is of the utmost importance to seize consumer opportunities in a timely manner. The interest of consumers in a commodity will be affected by time. Therefore, businesses must be sensitive enough to convert consumer interest into timely purchase action. It is of the utmost importance that Zhecheng Chili pepper enterprises take the comments of consumers on social media seriously. When consumers leave comments on the company's social media pages, the business should respond promptly to address any issues related to the company's products. This will help to maintain consumer interest and encourage further purchases.

Furthermore, the utilization of the Internet to highlight the quality advantages, standardize the management of employees and reduce geographical discrimination can also be a means of enhancing consumer interest. In the case of chili production in different townships in Zhecheng County, it is recommended that publicity and guidance be strengthened with the help of the Internet. Each production area has its own unique chili growth environment advantages. To reduce the "geographical discrimination" in the minds of consumers, the characteristics of these production areas should be introduced on the media platform. This will focus on the publicity of the chili pepper varieties produced in different townships in Zhecheng County. The aim is to inform consumers that although some varieties of Chili pepper are produced in some townships, the favorable geographic environment makes some varieties of Chili peppers richer in nutrients and of a higher quality. Furthermore, Zhecheng Chili peppers should continue to be cultivated using high-quality seeds to enhance the quality and taste of Zhecheng Chili peppers in accordance with market requirements. During this process, some of the cultivation links can be communicated to consumers via the Internet, thus enabling consumers to gain an understanding of the intentions of merchants and fostering goodwill and interest. Furthermore, the standardized management of Zhecheng Chili pepper processing workers is essential. This should include health and safety considerations in performance management procedures. For certain Zhecheng Chili pepper processing operations, standardized management of the workers' operating steps is also crucial. Additionally, the processing of Zhecheng Chili peppers through the Internet should be transparent to ensure consumer confidence and peace of mind.

It is recommended that a connection pathway with consumers be actively established through third-party applications. It is advisable to utilize the traffic to establish a connection with consumers and increase the number of topics. A well-chosen topic can facilitate the rapid dissemination of the product, as well as enhance its reputation. Cudgel Chili-related businesses may choose to create exclusive hotspots to build their own reputation. Alternatively, they may wish to take advantage of some hot topics, use events or other products to take advantage of the traffic, and provide channels for consumers to communicate with their services. Furthermore, businesses can maintain customer relationships through social media platforms such as WeChat by posting images and videos of the cultivation and harvesting of Zhecheng Chili peppers to their friends. To increase the visibility of Zhecheng Chili peppers in consumers' minds and to encourage engagement, the brand has implemented a strategy of offering incentives, such as forwarding the circle of friends to collect the

number of likes required to receive a bottle of chili sauce made from Zhecheng Chili peppers. The bottle of Chili sauce provides consumers with an opportunity to experience Zhecheng Chili. When consumers are highly satisfied with the experience, they become, in a sense, the disseminators of word-of-mouth about Zhecheng Chili.

It is recommended that the purchase channels be broadened, the effective supply be increased, and the situation be exploited to develop the market. In 2019, Zhecheng County in Henan Province ceased to be a nationally designated poverty-stricken county. This has coincided with a significant improvement in infrastructure and an unprecedented increase in internet penetration. Zhecheng Chili-related enterprises should capitalize on the policy incentives and utilize the sales channels established for Zhecheng Chili during the process of poverty alleviation, such as the "Internet + agriculture" model. This entails leveraging the e-commerce platform *Buy Together*, which is specifically geared towards agricultural products, to create a "Duoduo Harvest Pavilion" and intensifying their efforts to go online. It is recommended that greater efforts be made to develop the online sales of Zhecheng Chili pepper, with the objective of increasing the effective supply of the product while simultaneously expanding the market space for Zhecheng Chili pepper.

It is recommended that the information sharing mechanism be improved. The advent of the Internet has facilitated the dissemination of information, rendering it more convenient and expedient. However, the current market conditions have rendered the traditional approach of "wine is not afraid of the deep alley" less effective. Consequently, Zhecheng Chili pepper producers must adapt to this new reality. The SICAS Consumer Behavior Theoretical Model of the sharing module primarily concerns the dissemination of information through the Internet. Zhecheng Chili pepper-related enterprises should proactively establish accounts on media platforms such as *Little Red Book*. Additionally, they should create channels for consumers to share information on media platforms such as *TikTok* and *Little Red Book*. Furthermore, consumers will be more inclined to consider the authentic feedback on a product when making a purchasing decision. This underscores the importance for sellers of Zhecheng Chili peppers to prioritize consumer feedback, respond to each evaluation in a timely and sincere manner, and address any negative feedback on chili peppers constructively. The demonstration of a sincere attitude by the businessman in addressing the issue will also serve to enhance the positive image of Zhecheng Chili, at the same time providing an opportunity for further promotion of the product.

Conclusion

The traditional marketing model has constrained the perception of Zhecheng Chili as an agricultural product, resulting in a lack of consumer awareness. Leveraging the Internet can be a solution to this problem. Zhecheng Chili-related enterprises can facilitate an enhanced perception of Zhecheng Chili among consumers by optimizing the utilization of traffic flow and the efficient deployment of Internet and social media platforms. In terms of consumer interest, Zhecheng Chili-related enterprises should proactively identify avenues to stimulate consumer interest, capitalize on consumer opportunities, respond promptly to consumer interest, and facilitate the emergence of purchasing actions. In terms of communication services, Zhecheng Chili-related enterprises should collaborate with the Internet social media platform to facilitate the emergence of purchasing actions. In terms of communication services, Zhecheng Chili-related enterprises should connect with third-

party applications (APPs) and leverage the advantages of traffic to establish interactive pathways with consumers. In terms of purchasing actions, Zhecheng Chili-related enterprises should utilize the policy dividend to improve connectivity between online e-commerce and consumer perception networks. This can be achieved by implementing the "Internet + Agriculture" agricultural products sales method. In terms of purchasing actions, the "Internet + Agriculture" agricultural products sales method can be employed to enhance the connection rate between online e-commerce and consumers' perception networks, thereby increasing consumer purchasing efforts. In terms of experience sharing, Zhecheng Chili pepper-related enterprises can improve the information sharing mechanism and motivate consumers to share shopping information about Zhecheng Chili peppers, thus encouraging consumers to be more willing to share.

The SICAS Consumer Behavior Theory Model is employed to identify the resource advantages of the chili production area in Zhecheng County and to promote the innovation of its market competitiveness. This enables the development of more appropriate countermeasures for the chili industry in Zhecheng County. By providing solutions to address consumer behavior issues in the pepper industry in Zhecheng County, the development trajectory of the pepper industry in Zhecheng County is optimized, enabling it to flourish in a manner that is both high-quality and sustainable. Furthermore, the insights gained from this process can serve as a valuable reference point for the advancement of other regional agricultural product industries.

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Conflict of Interest

The authors declare no conflict of interest.

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More is Better or Too Much: Enterprise Digital Inputs and Total Factor Productivity

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Abstract

Digital input is an important way for enterprise development, but there is inconsistency as to whether digital input can sustainably improve enterprise total factor productivity. This paper empirically examines the relationship between digital inputs and enterprise total factor productivity using Shanghai and Shenzhen A-share listed enterprises as research samples. The results show that the relationship between digital inputs and enterprise total factor productivity is inverted U-shape, i.e., the impact of digital inputs on enterprise total factor productivity is not more than good, but may lead to too much, and the above conclusions are still valid after a series of robustness tests and the use of a variety of methods to mitigate endogeneity. Mechanism tests further suggest that financing constraints and agency costs are important ways in which firms' digital inputs affect total factor productivity. The heterogeneity test finds that the inverted U-shaped relationship between firms' digital inputs and total factor productivity is more significant in state-owned enterprises, industries with high marketization levels, and high-tech manufacturing. The findings of this paper enrich the theoretical research on the economic consequences of enterprise digitalization inputs, and provide an important reference for promoting the implementation of enterprise digitalization and achieving high-quality development.



Full Text Article



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Keywords: digitized inputs; total factor productivity; financing constraints; agency costs

Introduction

Report of the 20th National Congress of the Communist Party of China points out that it is necessary to accelerate the development of the digital economy and promote the deep integration of the digital economy and the real economy. At present, under the support of policy guidance, more and more enterprises begin to pay attention to digital construction and actively explore ways to improve the level of digital operation of enterprises. For example, Haier's connected factory to achieve customer personalized order production, Kute Intelligence to meet the customer's personalized customization requirements, Lin Qingxuan use of digital reshaping of enterprise management organization to achieve the turnaround of crisis into opportunity, etc. The successful experience of these enterprises shows that digitalization promotes the upgrading of the enterprise management, production and operation structure, which helps the enterprise to achieve the goal of cost reduction and increase efficiency, and to increase the enterprise's total factor productivity^[1]. However, some studies have found that in the process of enterprise implementation of digital transformation, blindly increasing digital investment is difficult to achieve positive results^[2], because this process is inevitably accompanied by a large number of equipment investment and technology upgrades, not only increases the management costs, the number of digital talent may not be able to keep up with the new technological requirements, which may lead to a decline in enterprise productivity^[3]. Accenture in the “win-win: collaboration to turn crisis into opportunity” report, pointed out that 66% of the surveyed enterprises did not improve the level of enterprise revenue through digital investment, that is, excessive digital investment will have a negative impact on the enterprise. This also suggests that there is no consensus on whether digital investment promotes or inhibits business development at the practical and theoretical levels. Therefore, further clarifying the boundaries of digital inputs affecting firms' total factor productivity can not only provide theoretical guidance for firms to rationally control the scale of digital inputs, but also be of great significance for the government to guide the policy practice of firms' digital inputs.

Based on this, this paper constructs a theoretical analysis framework of “enterprise digital input-total factor productivity” from the perspective of microenterprises, and reveals the relationship between digital input and enterprise total factor productivity in depth. Compared with the existing research literature, the potential marginal contributions of this paper are mainly reflected in the following: First, this paper finds that the relationship between digital inputs and enterprise total factor productivity is inverted U-shape, i.e., there exists a “critical value” of the impact of enterprises' digital inputs on total factor productivity, and this conclusion deepens the “double-edged sword” effect of digital inputs. This finding deepens the theoretical research on the “double-edged sword” effect of digital inputs. Secondly, this paper explores the impact of digital inputs on enterprise total factor productivity through financing constraints and agency costs, which reveals the mechanism of digital inputs affecting enterprise total factor productivity, and enriches the

research on the mechanism of the economic consequences of enterprise digital inputs. Third, this paper identifies the contextual factors affecting the relationship between digital inputs and enterprise total factor productivity, and finds that the inverted U-shape relationship between digital inputs and enterprise total factor productivity is more significant in state-owned enterprises, industries with a higher level of marketization, and high-tech manufacturing industries, which expands the boundaries of the impact of digital inputs on enterprise total factor productivity, and provides theoretical references for the formulation of relevant policies.

Literature Review and Research Hypothesis

1. Literature Review

1.1 A Study of the Economic Consequences of Business Digitization

Research on the economic consequences of enterprise digitization mainly focuses on three aspects. First, in terms of cost reduction and efficiency. Digital technology, the degree of digitization and the ability of digital transformation are the main driving force of enterprise digital transformation, the higher the ability of digital transformation, the better the performance of the enterprise^[4], and the input of digital factors can create new digital products and services, promote the enterprise business performance improvement^[5], so as to have a positive impact on the enterprise's total factor productivity^[6]. Secondly, it is in the aspect of enterprise innovation. Data as an emerging production factor into the production process, changing the traditional production mode of enterprises, technology update iteration speed up, help enterprises to provide products and services with high efficiency, for example, the higher level of digital technology to effectively promote the innovation of products and services^[7]. Third, in the green development. Digitization enables enterprises to obtain more resources and effectively enhance the level of green innovation^[8], which in turn promotes green development^[9]. Another study found that digitization can only have a positive impact on enterprise development under certain conditions, and sufficient digital capacity and digital knowledge reserves can only achieve a high degree of digitization^[10], i.e., the impact of digital transformation on the enterprise may not be a linear relationship^[3], the phenomenon is known as the “digitization paradox”, explore The phenomenon is called “digital paradox”, and exploring the causes of “digital paradox” is also an important issue in theoretical research.

1.2 A study of the factors affecting total factor productivity

Existing literature has explored the influencing factors of enterprise total factor productivity from various aspects, this paper briefly categorizes and outlines the relevant factors from both the internal and external environment of the enterprise: First, the influence of internal factors of the

enterprise. For example, technology level and capital investment are important factors affecting the total factor productivity of enterprises. Enterprise technology upgrading can improve total factor productivity^[11], the steady growth of R&D expenditures will also improve enterprise total factor productivity^[12], the development of green finance promotes enterprise green total factor productivity^[13], etc.; Second, the influence of external environmental factors. For example, government subsidies and policy regulations may have different degrees of impact on enterprise total factor productivity. Government subsidies trigger rent-seeking activities of enterprises, which leads to the negative impact of government subsidies on the total factor productivity of enterprises^[14]. In addition, in order to meet the realistic needs of promoting environmentally sustainable development, the relevant environmental regulation requirements are getting higher and higher, requiring enterprises to emphasize low-carbon development and increase the strength of innovation and development, which will also have an impact on total factor productivity^[15]. Therefore, it is also an important issue to continuously deepen the exploration of the influencing factors of total factor productivity.

In summary, research on enterprise digitization and total factor productivity has received widespread attention, but there are still inconsistencies in the conclusions of studies on the relationship between enterprise digitization inputs and total factor productivity. Although some studies have pointed out that there may be a “digital paradox” in the process of enterprise digital transformation, the mechanism of this phenomenon needs to be further explored. Therefore, this paper further explores the non-linear relationship of digital inputs on enterprise total factor productivity and the underlying mechanisms to enrich the existing theoretical research literature.

2. Research Hypothesis

Digital inputs affect the total factor productivity of enterprises by improving efficiency, reducing costs and driving technological upgrades. Specifically: first, digital inputs improve enterprise management efficiency. Digital inputs prompt enterprises to carry out business model reforms, improve the efficiency of factor allocation, and promote the improvement of enterprise management efficiency, which in turn promotes the improvement of enterprise total factor productivity. In the process of digital inputs, the use of digital technology to reform the existing business model, or create a new business model^[16], can enhance the flexibility and sensitivity to respond to the market. Moreover, digital inputs realize the real-time and transparent management of the enterprise, constrain the behavior of managers, strengthen the supervision of managers, and avoid reducing the efficiency of the enterprise due to agency problems^[17]. In addition, digital technology innovation improves the enterprise's ability to capture and analyze market information, promotes the

improvement of the efficiency of factor allocation and the improvement of the allocation method, and effectively improves the efficiency of enterprise management. For example, Feng et al^[18] suggest that digitalization can promote enterprise technology innovation and improve the efficiency of factor allocation, which in turn improves the total factor productivity of enterprises. Second, digital inputs can reduce costs. Through digital technological innovation, enterprise management and operation methods are upgraded, enterprise digital development is strengthened^[19], production costs are reduced, and enterprise total factor productivity is increased. The increase in digital inputs helps to break the internal information silos of enterprises, improve the efficiency of enterprise information communication, reduce enterprise transaction costs^[20], and realize the improvement of resource allocation efficiency and productivity. At the same time, digitalization is also conducive to the efficient use of raw materials in the production process^[21], improve the efficiency of the use of resource elements, and thus reduce management costs^[22]. In addition, digital inputs to improve enterprise R & D innovation capacity, emerging digital technologies to help enterprises integrate market demand information, collect and quickly analyze product information, help enterprises produce higher quality and meet market demand for products, thereby reducing operating costs and improving enterprise total factor productivity^[23]. Third, digital inputs to promote technological upgrading. Digital inputs to the enterprise to bring a new production mode, data as a new factor of production to participate in production, prompting enterprises to constantly update the technical means, and thus promote the total factor productivity of enterprises. Digital technology can broaden the enterprise information access channels, improve the integration of information resources and analytical capabilities, help to improve the quality of enterprise investment decision-making^[24]. At the same time, digital technology helps enterprises accurately capture the information they need, which helps them carry out technological innovation more effectively^[25]. In the production process, digital technology can also replace part of the low-skilled labor force, reduce the degree of manual involvement^[26], and thus improve the productivity of enterprises. In addition, digital inputs prompt enterprises to absorb or train a group of employees with high-level skills, optimize the structure of labor resources, and thus promote the improvement of enterprise total factor productivity^[24]. Finally, digital inputs also bring more advanced emerging equipment and systems, such as artificial intelligence technology to trigger a worldwide change in social productivity. Some studies have shown that AI technological innovation effectively reduces production costs, improves enterprise productivity, and significantly increases enterprise total factor productivity^[27].

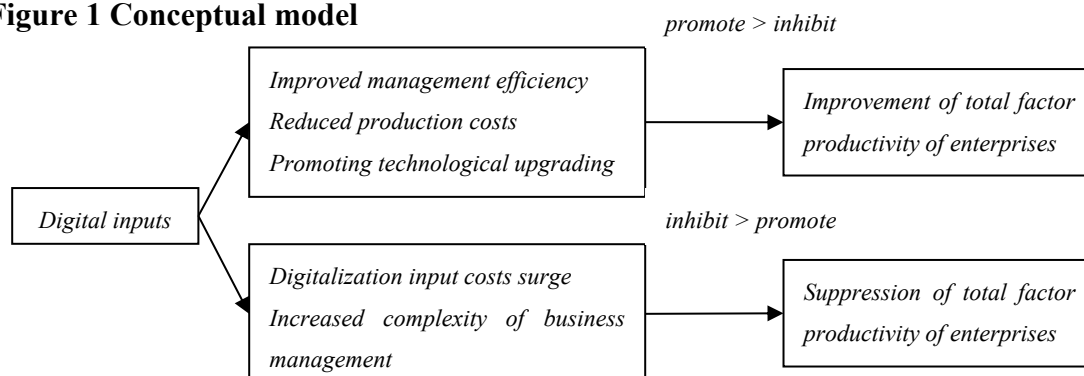
It has also been found that digitization is not a positive linear relationship with the enterprise total factor productivity continuously, in general, the digital input will increase the input cost and the complexity of enterprise management: one is to increase the input cost, when the enterprise over-digitization input, it will increase the enterprise information cost input, and is not conducive to the

enterprise to improve its innovation performance, and even inhibit the improvement of its innovation performance^[28]. Enterprise digital inputs lead to technological upgrading, to achieve the purpose of cost reduction and efficiency, but excessive digital inputs lead to an increase in the amount of capital investment, resulting in an imbalance in the allocation of the enterprise's limited resources^[29], but instead inhibit the enhancement of the enterprise's total factor productivity. As Karhade et al^[30] statistically found that more than half of IT projects have cost overruns, and over-investment inhibits the innovation effect, which in turn inhibits the improvement of enterprise total factor productivity. In addition, Gebauer et al^[31] also proposed that excessive digital investment will weaken innovation, while failing to achieve the expected revenue growth. Secondly, it is to increase the complexity of enterprise management, enterprises should rationally plan the digital input based on the actual situation such as capital scale, operation mode, development direction, etc. Blindly carrying out the digital input will increase the burden of enterprise operation, leading to the confusion of management and production process, which is contrary to the expected effect. Among them, Pang Ruizhi et al^[32] found that digital inputs can be advanced digital technology and digital systems to promote enterprises to strengthen communication and cooperation with the outside world to enhance the effect of enterprise innovation, but at the same time, under the influence of emerging technologies, it will strengthen the complexity of enterprise information management, to avoid the leakage of information into the malicious competition, resulting in a decline in enterprise total factor productivity. Digitization brings together the various processes of the enterprise on a digital platform, which is conducive to real-time monitoring and systematic analysis, and can improve the efficiency of each process; however, excessive digital inputs will lead to excessive plunging into internal analysis, affecting the enterprise's real-time adjustment of the direction of innovation and development^[33], and ultimately the reverse effect.

From the above analysis, it can be seen that the appropriate amount of digital inputs promotes the total factor productivity of enterprises, and excessive digital inputs inhibit the total factor productivity of enterprises, which leads to the formulation of Hypothesis 1:

Hypothesis 1: The effect of digitization inputs on firms' total factor productivity is inverted U-shaped.

Figure 1 Conceptual model



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Research design

3. Sample selection and data processing

This paper takes the A-share listed companies in Shanghai and Shenzhen from 2008 to 2020 as the research sample, and the data are mainly from Wind database. In the process of sample collection and processing, the samples are screened with reference to the previous common practice, financial enterprises and ST, *ST these special enterprises are excluded from the samples, and the samples with missing key variables are excluded, and finally 25400 observations are obtained. In order to avoid the influence of extreme values on the estimation results, the sample is shrink-tailed by 1% up and down.

4. Variable Settings

4.1 Explained variable

Total factor productivity (Intfp). Total factor productivity is the “residual value” after removing tangible factors such as labor and capital, which reflects the system productivity of enterprises optimizing management mode and upgrading enterprise structure. The LP method is chosen to calculate total factor productivity^[34], and total factor productivity is logarithmized.

4.2 Explanatory variable

Digitalization inputs (digitalRatio). Drawing on existing literature^[35], the digital input of enterprises is measured using the amount of digitization-related intangible assets as a ratio of intangible assets using keywords related to digitization disclosed in the notes to the financial statements, including: digitization, big data, blockchain, Internet of Things, data systems, management systems, etc.

4.3 Intermediary variable

Drawing on existing literature, this paper uses financing constraints (SA) and agencyCost as mediating variables to measure the impact of digitized inputs on total factor productivity. In line with existing literature practices, the SA index is used to measure financing constraints, and agencyCost is measured as the sum of overhead and selling expenses divided by the proportion of

sales revenue.

4.4 Control variable

Referring to the existing research literature^{[36][37]}, firm characteristics and governance level variables are selected as control variables. Among them, firm characteristics level control variables include: firm size (Size), firm age (Age), book-to-market ratio (MB_ratio), gearing ratio (Leverage), cash holdings (Cash_ratio), and the nature of ownership (SOE), and corporate governance level control variables include: board size, top shareholder shareholding ratio (TopHolder), and institutional investor shareholding ratio (TopHolder). Shareholder Holding (TopHolder), Institutional Investor Holding (instRatio), and Sole Director Ratio (Ind_ratio), while controlling for regional, yearly, and industry effects. The specific definitions and measurements of the variables in the model are shown in Table 1.

Table 1 List of variable definitions

	Name	Define
Intfp	Total factor productivity	Taking the natural logarithm
digitalRatio	Digital inputs	Digitization-related inputs in the notes to the financial statements
SA	Financing constraints	$SA = -0.737 * Size + 0.043 * Size^2 - 0.04 * Age$
agencyCost	Agency cost	(Administrative expenses + Selling expenses) divided by sales revenue
Size	Enterprise size	Natural logarithm of total assets
Age	Age of business	Difference between the current year and the year of registration
Leverage	Asset-liability ratio	Liabilities divided by assets
MB_ratio	Book-to-market ratio	Market value divided by book value
Cash_ratio	Cash holdings	Cash and cash equivalents divided by total assets at end of period
BoardSize	Board size	Natural logarithm of the number of Board members plus one
Ind_ratio	Ratio of sole director	Independent directors divided by the total number of directors
TopHolder	Shareholding ratio of the largest shareholder	Shareholding of the first largest shareholder (%)
instRatio	Institutional investor shareholding	Shareholding of institutional investors (%)
SOE	Nature of property rights	State-owned enterprises are assigned a value of 1, while others are assigned a value of 0.

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5. Measurement model

This paper uses the following model to test the inverted U-shaped relationship between digitization inputs and firms' total factor productivity:

$$\text{Intfp}_{it} = \alpha + \beta_1 \text{digitalRatio}_{it} + \beta_2 \text{digitalRatio}_{it}^2 + \sum \gamma X_{it} + \text{Year} + \text{Industry} + \text{Province} + \varepsilon_{it} \quad (1)$$

In equation (1) the explanatory variable Intfp is the total factor productivity indicator of the firm, the explanatory variables digitalRatio and digitalRatio² are the primary and secondary terms of the digitized input indicator, respectively, X is the control variable, Year year control variable, Industry is the industry control variable, Province is the region control variable, and ε is the residuals .

Analysis of empirical results

6. Results of descriptive statistics

Table 2 reports the descriptive statistics of the main variables. The mean and median of total factor productivity (Intfp) are 9.101 and 8.986, respectively, which are relatively close to each other, indicating that the total factor productivity of enterprises in China roughly shows a trend of lognormal distribution. The mean value of digitalRatio is 0.091, reflecting the low level of digital input of listed enterprises in China.

Table 2 Descriptive statistics

	N	mean	sd	min	p25	p50	p75	max
Intfp	25400	9.101	1.106	5.785	8.334	8.986	9.746	13.375
digitalRatio	25400	0.089	0.212	0.000	0.000	0.011	0.055	1.000
SA	25400	-3.835	0.257	-5.778	-3.991	-3.829	-3.670	-2.644
agencyCost	25400	0.161	0.126	0.016	0.077	0.127	0.204	0.688
Size	25400	22.165	1.272	19.687	21.248	21.982	22.877	26.101

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Age	25400	18.720	5.826	1.000	15.000	18.000	22.000	66.000
Leverage	25400	0.429	0.203	0.049	0.267	0.424	0.583	0.922
MB_ratio	25400	0.619	0.244	0.120	0.430	0.618	0.807	1.148
Cash_ratio	25400	0.193	0.135	0.015	0.097	0.156	0.250	0.716
BoardSize	25400	2.253	0.176	1.792	2.079	2.303	2.303	2.773
Ind_ratio	25400	0.374	0.053	0.333	0.333	0.333	0.429	0.571
TopHolder	25400	34.992	14.876	8.810	23.285	33.055	45.090	74.820
instRatio	25400	39.083	23.299	0.068	19.349	39.741	57.380	87.947
SOE	25400	0.395	0.489	0.000	0.000	0.000	1.000	1.000

7. Benchmark regression results

Table 3 presents the results of the benchmark regression, i.e., the results of the test of whether there is a non-linear effect of digital inputs on firms' total factor productivity. The results of the benchmark regression with only industry and year fixed effects but no other control variables are presented in column 1 of Table 3, where the regression coefficient of digitalRatio2 is negative and significant at the 1% level. Column 2 of Table 3 presents the results of the regression with the inclusion of other control variables but no year, industry, and region fixed effects, and the regression coefficient for digitalRatio2 is -0.449, which is significant at the 1% level. Column 3 of Table 3 presents the results of the baseline regression with other control variables and industry and year fixed effects, with a regression coefficient for digitalRatio2 of -0.150 and significant at the 5% level. Table 3, column 4 presents the results of the benchmark regression with the addition of other control variables, and region and year fixed effects. digitalRatio2 has a regression coefficient of -0.361 and is significant at the 1% level. In column 5 of Table 3, the results of the benchmark regression with the addition of other control variables, and region and industry fixed effects, the regression coefficient of digitalRatio2 is -0.139, and it is significant at the 10% level. It can be seen that digital inputs have a significant inverted U-shaped relationship with enterprise total factor productivity, and Hypothesis 1 is verified. This suggests that appropriate digital inputs promote enterprise total factor productivity improvement, while excessive digital inputs inhibit enterprise

total factor productivity improvement.

Table 3 Baseline regression results

	1	2	3	4	5
	Intfp				
digitalRatio	0.813*** (0.116)	0.570*** (0.068)	0.355*** (0.063)	0.468*** (0.068)	0.342*** (0.063)
digitalRatio ²	-1.015*** (0.125)	-0.449*** (0.077)	-0.150** (0.072)	-0.361*** (0.078)	-0.139* (0.071)
Size		0.675*** (0.004)	0.722*** (0.004)	0.696*** (0.005)	0.692*** (0.004)
Age		0.002** (0.001)	0.002*** (0.001)	0.004*** (0.001)	0.001 (0.001)
Leverage		0.805*** (0.027)	0.646*** (0.027)	0.816*** (0.027)	0.688*** (0.026)
MB_ratio		-0.115*** (0.020)	-0.244*** (0.022)	-0.296*** (0.023)	-0.084*** (0.019)
Cash_ratio		0.790*** (0.032)	0.500*** (0.031)	0.742*** (0.032)	0.510*** (0.030)
BoardSize		-0.127*** (0.028)	-0.055** (0.026)	-0.126*** (0.028)	-0.005 (0.026)
Ind_ratio		-0.447*** (0.089)	-0.328*** (0.080)	-0.400*** (0.088)	-0.244*** (0.081)
TopHolder		0.002*** (0.000)	0.003*** (0.000)	0.002*** (0.000)	0.003*** (0.000)
instRatio		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
SOE		-0.062*** (0.009)	-0.020** (0.009)	-0.025*** (0.010)	0.024*** (0.009)
_cons	8.430*** (0.053)	-5.932*** (0.108)	-7.092*** (0.106)	-6.107*** (0.112)	-6.666*** (0.108)
Province	No	No	No	Yes	Yes
Industry	Yes	No	Yes	No	Yes
Year	Yes	No	Yes	Yes	No
N	25400	25400	25400	25400	25400
adj_R ²	0.125	0.696	0.745	0.709	0.750

Note: Robust standard errors in parentheses, * denotes $p < 0.1$, ** denotes $p < 0.05$, *** denotes $p < 0.01$, same as in the table below.

8. Endogeneity test

8.1 Instrumental variable method

There may be endogeneity problems caused by reverse causality between digitization inputs and firms' total factor productivity, resulting in estimation bias. To mitigate the endogeneity problem, the benchmark regression is re-estimated using the two-stage least squares method, using the mean value of the digitization degree of other enterprises in the same industry (excluding the enterprise itself) (aveIndDT) as the instrumental variable, the reason being that the mean value of the digitization degree of other enterprises in the same industry except the enterprise reflects the cognitive level of digitization inputs and the degree of application of the enterprise in the industry, and the larger the mean value is the larger the digitization inputs are, which The greater the mean value, the greater the digitization investment, which meets the requirement of relevance of instrumental variables; while the digitization degree of individual enterprises will not have a direct impact on the total factor productivity of the whole industry, which meets the requirement of exogeneity of instrumental variables.

From the empirical results, Table 4, column 1 shows the first-stage regression results, aveIndDT coefficient is positive and significant at 1% level, that is, the mean digitization degree of the same industry is significantly positively correlated with the digital inputs, which meets the correlation condition of the selected instrumental variables; Table 4, column 2 shows the second-stage regression results, digitalRatio2 coefficient is significantly negative at 1% level, and it passes the instrumental variable exogeneity test, indicating that the baseline regression conclusions remain unchanged after mitigating the endogeneity problem.

8.2 Heckman two-stage model

Due to the possible endogeneity problem caused by sample selection bias, in order to solve the sample selection bias problem, this paper adopts the Heckman two-step method. In the Heckman two-stage test, the first stage sets the explanatory variable as a dummy variable, denoted by DRratio, which takes the value of 1 if the firm has implemented digital inputs, and 0 if it has not, and chooses the same control variables as in the baseline regression, and applies the Probit model for regression to compute the Inverse Mills Ratio (IMR), and the results are shown in Table 4, column 4. Column 3, the results are significant. In the second stage, IMR was included as a control variable in the regression equation, and the results are shown in column 4 of Table 4, with the quadratic term coefficient still significantly negative at the 1% level, consistent with the baseline regression, and the conclusions remain unchanged.

8.3 Controlling for corporate fixed effects

The main test is regressed using a fixed effects model to eliminate the effects of individual heterogeneity and omitted variables. The results after controlling for firm fixed effects are shown in column 5 of Table 4, where the regression coefficient of digitalRatio2 is negative and significant at the 5% level, and digital inputs show a significant inverted U-shaped relationship with firms' total factor productivity, and the conclusion is consistent with the benchmark regression.

Table 4 Endogeneity test

	1	2	3	4	5
	digitalRatio	ln_tfp	DRratio	ln_tfp	ln_tfp
aveIndDT	0.336*** (0.029)		1.838*** (0.657)	3.051*** (0.319)	
aveIndDT ²			-7.739*** (2.900)	-11.011*** (1.368)	
digitalRatio		9.736*** (1.587)			0.157*** (0.056)
digitalRatio ²		-11.253*** (2.118)			-0.112* (0.059)
IMR				1.242*** (0.210)	
Size	-0.011*** (0.001)	0.681*** (0.012)	0.067*** (0.012)	0.753*** (0.007)	0.634*** (0.006)
Age	-0.001*** (0.000)	0.006*** (0.001)	-0.008*** (0.002)	-0.002** (0.001)	0.001 (0.001)
Leverage	0.071*** (0.008)	0.605*** (0.042)	0.178*** (0.060)	0.760*** (0.031)	0.198*** (0.023)
MB_ratio	-0.045*** (0.007)	-0.127*** (0.037)	-0.125** (0.057)	-0.300*** (0.024)	-0.080*** (0.014)
Cash_ratio	0.099*** (0.012)	0.335*** (0.060)	0.163** (0.080)	0.603*** (0.035)	0.191*** (0.024)
BoardSize	-0.010 (0.009)	-0.147*** (0.042)	-0.002 (0.064)	-0.050* (0.026)	0.110*** (0.027)
Ind_ratio	0.028 (0.026)	-0.424*** (0.111)	0.257 (0.206)	-0.196** (0.084)	0.187** (0.074)
TopHolder	0.000* (0.000)	0.003*** (0.000)	0.002*** (0.001)	0.004*** (0.000)	0.000 (0.000)
instRatio	-0.000 (0.000)	0.001* (0.000)	-0.000 (0.001)	0.001*** (0.000)	0.000*** (0.000)
SOE	-0.007**	0.006	-0.201***	-0.128***	-0.034**

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	(0.003)	(0.013)	(0.022)	(0.021)	(0.016)
_cons	0.248***	-5.226***	-1.149***	-8.484***	-5.493***
	(0.034)	(0.410)	(0.282)	(0.285)	(0.149)
Province	No	No	No	No	No
Industry	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	No
N	25400	25400	25400	25400	25201
adj_R ² / pseudo_R ²	0.237	0.470	0.087	0.745	0.920
Kleibergen-Paap rk LM		32.38			
		[0.000]			
Kleibergen-Paap rk Wald		16.202			
F		{7.03}			

Note: In parentheses are the critical values of the Stock-Yogo test at a level where the true significance level does not exceed 10%.

9. Robustness check

9.1 Independent variable lagged one period

The effect of digital inputs on total factor productivity is examined using the independent variable lagged one period as an explanatory variable. As can be seen from column 1 of Table 5, the coefficient of digitalRatio2 is significantly negative at the 1% level, and the relationship between digitalization inputs and firms' total factor productivity is still inverted U-shape, which further indicates that the results of this paper are reliable.

9.2 Controlling for fixed effects

In order to avoid errors caused by some unobservable factors, an interaction term between the time dummy variable and the industry dummy variable is added to the regression. The regression results are shown in column 2 of Table 5, where the regression coefficient of digitalRatio2 is significantly negative, and digital inputs show a significant inverted U-shaped relationship with firms' total factor productivity.

9.3 Exclusion of special events

Excluding the 2010 crisis event and the 2015 stock market crash event to eliminate the influence of special events on the main effect, the regression results are shown in column 3 of Table 5, where the regression coefficient of digitalRatio2 is significantly negative, and digital inputs show a

significant inverted U-shape relationship with firms' total factor productivity.

Table 5 Robustness test

	1	2	3
	Intfp		
L.digitalRatio	0.451*** (0.076)		
L.digitalRatio ²	-0.367*** (0.087)		
digitalRatio		0.359*** (0.064)	0.384*** (0.069)
digitalRatio ²		-0.162** (0.072)	-0.151* (0.078)
Size	0.698*** (0.005)	0.721*** (0.004)	0.719*** (0.005)
Age	0.003*** (0.001)	0.002*** (0.001)	0.002*** (0.001)
Leverage	0.826*** (0.030)	0.637*** (0.027)	0.657*** (0.030)
MB_ratio	-0.316*** (0.025)	-0.242*** (0.022)	-0.214*** (0.024)
Cash_ratio	0.807*** (0.037)	0.493*** (0.031)	0.448*** (0.035)
BoardSize	-0.152*** (0.030)	-0.053** (0.026)	-0.086*** (0.030)
Ind_ratio	-0.395*** (0.096)	-0.334*** (0.080)	-0.380*** (0.092)
TopHolder	0.002*** (0.000)	0.003*** (0.000)	0.003*** (0.000)
instRatio	0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)
SOE	-0.019* (0.011)	-0.019** (0.009)	-0.033*** (0.010)
_cons	-6.271*** (0.124)	-7.053*** (0.143)	-6.996*** (0.124)
Province	Yes	No	No
Industry	No	Yes	Yes
Year	Yes	Yes	Yes
N	21206	25400	19784
adj_R ²	0.707	0.747	0.747

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10. Mechanism test

When enterprises have financing constraints, it may lead to an imbalance in enterprise resource allocation and reduce enterprise total factor productivity^[38]. Enterprise digitization inputs broaden the information flow channels, increase information transparency, and alleviate information asymmetry^[39], which helps to reduce the financing constraints of the enterprise^[40], and thus plays a positive role in enhancing the total factor productivity of the enterprise. However, in the process of digitization, it may also lead to a more prominent agency problem between corporate management and shareholders, and the agency cost will have a negative impact on corporate performance^[41], which in turn inhibits the enhancement of corporate total factor productivity. The above analysis suggests that financing constraints and agency costs are important channels through which digitization inputs affect firms' total factor productivity.

10.1 The role of financing constraints

Drawing on the study of Sun Xuejiao et al^[42], the SA index, which is composed of two exogenous variables, namely, firm size and firm age, is chosen as a proxy for corporate financing constraints, in order to avoid the subjectivity and measurement bias of other measures. The measurement equation of the SA index is shown in the model (2). All the SA indexes are negative, and the larger the value, the greater the constraint.

$$SA = 0.043 \times \text{size}^2 - 0.04 \times \text{Age} - 0.073 \times \text{size} \quad (2)$$

The regression results are shown in columns 1 and 2 of Table 6. Column 1 shows the regression results of digitization on financing constraints, and the regression coefficient of digitalRatio is -0.042, which is significant at the 1% level, which indicates that increasing digitization inputs can alleviate the financing constraints of the enterprises; Column 2 shows the regression results of digitization inputs on total factor productivity after the addition of financing constraints, in which the regression coefficient of SA is -0.211 and is significant at the 1% level, which indicates that easing financing constraints can promote enterprises to improve total factor productivity; the regression coefficient of digitalRatio2 is -0.140, which is significant at the 10% level, which shows that financing constraints play a partly intermediary role in the impact of digital inputs on total factor productivity, i.e., increasing digital inputs can alleviate financing constraints, and then promote the the increase of total factor productivity of enterprises.

10.2 The role of agency costs

Drawing on Rashid's^[43] study, this paper uses the sum of overhead and selling expenses as a percentage of sales as the first type of agency costs for the mediation effect test. The regression results are shown in columns 3 and 4 of Table 6. Column 3 shows the regression results of digital inputs on agency costs, and the regression coefficient of digitalRatio is 0.108, which is significant at the 1% level, which indicates that increasing digital inputs significantly increases the agency costs of firms. Column 4 shows the regression results of digitized inputs on total factor productivity after adding agencyCost, in which the regression coefficient of agencyCost is -1.890 and is significant at the 1% level, which indicates that the increase of agencyCost will inhibit the increase of enterprise's total factor productivity; and the regression coefficient of digitalRatio2 is -0.380, which is significant at the 1% level, which shows that the agency cost plays a partial mediating role in the impact of digital input on total factor productivity; that is, excessive increase in digital input will lead to an increase in agency cost, thus inhibiting the enterprise's total factor productivity improvement.

Table 6 Mechanism test

	1	2	3	4
	SA	Intfp	agencyCost	Intfp
digitalRatio	-0.023** (0.011)	0.351*** (0.063)	0.107*** (0.013)	0.566*** (0.060)
digitalRatio ²	0.031*** (0.012)	-0.145** (0.072)	-0.121*** (0.014)	-0.389*** (0.066)
SA		-0.175*** (0.035)		
agencyCost				-1.968*** (0.039)
Size	0.023*** (0.001)	0.726*** (0.004)	-0.010*** (0.001)	0.703*** (0.004)
Age	-0.037*** (0.000)	-0.004*** (0.001)	0.001*** (0.000)	0.004*** (0.001)
Leverage	-0.011*** (0.004)	0.644*** (0.027)	-0.102*** (0.005)	0.446*** (0.024)
MB_ratio	-0.036*** (0.004)	-0.250*** (0.022)	-0.078*** (0.005)	-0.398*** (0.020)
Cash_ratio	0.073*** (0.006)	0.513*** (0.031)	0.061*** (0.007)	0.620*** (0.029)
BoardSize	0.005 (0.005)	-0.055** (0.026)	0.011** (0.005)	-0.033 (0.024)

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Ind_ratio	0.119*** (0.014)	-0.307*** (0.081)	0.081*** (0.015)	-0.170** (0.075)
TopHolder	0.000*** (0.000)	0.003*** (0.000)	-0.000*** (0.000)	0.002*** (0.000)
instRatio	-0.000*** (0.000)	0.001*** (0.000)	0.000* (0.000)	0.001*** (0.000)
SOE	-0.004** (0.002)	-0.021** (0.009)	-0.011*** (0.002)	-0.043*** (0.008)
_cons	-3.672*** (0.026)	-7.734*** (0.172)	0.406*** (0.020)	-6.293*** (0.101)
Province	No	No	No	No
Industry	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
N	25400	25400	25400	25400
adj_R ²	0.845	0.745	0.236	0.783

11. Heterogeneity test

11.1 Nature of property rights

There are differences between state-owned and non-state-owned enterprises in terms of resources, policies, and business objectives, so there are differences in the impact of digital inputs on the total factor productivity of enterprises. Columns 1 and 2 of Table 7 show the regression results for different property rights properties, and the regression coefficient of digitalRatio2 is negative and significant at the 1% level in state-owned enterprises, while it is not significant in non-state-owned enterprises. It can be seen that relative to non-state-owned enterprises, moderately increasing the scale of digital inputs in state-owned enterprises will increase enterprise total factor productivity to a greater extent, and excessive digital inputs will inhibit enterprise total factor productivity.

11.2 Enterprise Technology Characteristics

Compared to traditional manufacturing firms, high-tech manufacturing firms may focus more on digitization inputs to enhance their competitive advantage^[44], so the impact of digitization inputs on firms' total factor productivity may also differ. Columns 3 and 4 of Table 7 report the results of the test for whether the firm is a high-tech manufacturing firm. The regression coefficient of digitalRatio2 is negative and significant at the 1% level in column 4 for high-tech manufacturing, while it is not significant in column 3 for non-high-tech manufacturing firms. It can be seen that, relative to non-high-tech manufacturing firms, for high-tech manufacturing firms, moderate digital

inputs can increase total factor productivity, but excessive digital inputs can have a dampening effect on firms' total factor productivity improvement.

11.3 Level of marketization

There are differences in the level of marketization in different regions, and regions with a high level of marketization are rich in factor resources and have a perfect institutional environment^[45], which may also have different impacts on the total factor productivity of enterprises. Columns 5 and 6 of Table 7 test the relationship between enterprises' digital inputs and total factor productivity under different marketization levels. The regression coefficient of digitalRatio2 is negative and significant at the 5% level for the sample of firms in regions with high levels of marketization in column 6, while it is not significant for the sample of firms in regions with lower levels of marketization in column 5. It can be seen that relative to enterprises in regions with lower levels of marketization, moderate digital inputs by enterprises in regions with higher levels of marketization can help to increase the total factor productivity of enterprises, but excessive increase in digital inputs can have a significant inhibitory effect on the total factor productivity of enterprises.

Table 7 Heterogeneity test

	1	2	3	4	5	6
	ln tfp					
	non-SOE	SOE	Tech-low	Tech-high	MI-low	MI-high
digitalRatio	0.258*** (0.079)	0.534*** (0.132)	0.214** (0.108)	0.502*** (0.096)	0.358*** (0.091)	0.510*** (0.104)
digitalRatio ²	0.017 (0.091)	-0.408*** (0.145)	-0.027 (0.123)	-0.333*** (0.110)	-0.135 (0.098)	-0.336** (0.136)
Size	0.717*** (0.007)	0.737*** (0.007)	0.734*** (0.007)	0.684*** (0.007)	0.728*** (0.007)	0.720*** (0.007)
Age	0.000 (0.001)	0.006*** (0.001)	0.003** (0.001)	0.003*** (0.001)	-0.002 (0.001)	0.006*** (0.001)
Leverage	0.646*** (0.037)	0.554*** (0.051)	0.556*** (0.041)	0.830*** (0.044)	0.726*** (0.042)	0.498*** (0.041)
MB_ratio	-0.170*** (0.030)	-0.270*** (0.042)	-0.347*** (0.032)	-0.114*** (0.036)	-0.279*** (0.034)	-0.268*** (0.032)
Cash_ratio	0.299*** (0.041)	0.742*** (0.066)	0.343*** (0.047)	0.731*** (0.051)	0.536*** (0.048)	0.340*** (0.047)
BoardSize	-0.022 (0.040)	-0.169*** (0.044)	-0.107*** (0.039)	-0.165*** (0.049)	-0.148*** (0.040)	-0.037 (0.041)
Ind_ratio	-0.273**	-0.388***	-0.562***	-0.248*	-0.209*	-0.602***

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	(0.119)	(0.144)	(0.121)	(0.150)	(0.127)	(0.122)
TopHolder	0.003***	0.003***	0.003***	0.002***	0.002***	0.004***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
instRatio	0.001***	-0.000	0.001***	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
SOE			0.046***	-0.080***	-0.054***	0.039***
			(0.013)	(0.018)	(0.014)	(0.014)
_cons	-7.144***	-7.131***	-7.138***	-5.840***	-7.025***	-6.788***
	(0.168)	(0.180)	(0.159)	(0.196)	(0.161)	(0.167)
Province	No	No	No	No	No	Yes
Industry	Yes	Yes	Yes	Yes	Yes	No
Year	Yes	Yes	Yes	Yes	Yes	Yes
N	13022	7243	10340	9925	11648	8617
adj_R ²	0.713	0.760	0.752	0.715	0.740	0.749

Conclusions and recommendations of the study

With the booming development of digital economy, the driving role of data as a new production factor for enterprises has become more and more obvious, and digitization has become a necessary option for enterprise development, and the related research has become more and more abundant. This paper takes Shanghai and Shenzhen A-share enterprises as research samples to empirically examine the impact of digital inputs on enterprise total factor productivity and its mechanism, and finds that: (1) Digital inputs and enterprise total factor productivity show an inverted U-shape relationship, i.e., moderate digital inputs will promote enterprise total factor productivity, while excessive digital inputs will inhibit enterprise total factor productivity, i.e., there is a “tipping point” in the impact of digital inputs on enterprise total factor productivity. In other words, there is a “tipping point” in the impact of digital inputs on enterprise total factor productivity. In other words, there is a “double-edged sword” effect of digital inputs, and simply relying on increasing digital inputs will not increase enterprise total factor productivity in a sustainable manner. (2) Financing constraints and agency costs play a partial mediating role in the impact of digital inputs on enterprise total factor productivity, reflecting that digital inputs can affect enterprise total factor productivity through the channels of financing constraints and agency costs. (3) The impact of digital inputs on enterprise total factor productivity is characterized by heterogeneity, and the inverted U-shaped relationship of the impact of digital inputs on enterprise total factor productivity exists in state-owned enterprises, high-tech manufacturing enterprises, and enterprises in regions with higher levels of marketization.

Combined with the above conclusions, this paper puts forward the following suggestions: (1)

Fully consider the inflection point effect of digital input, digital development is the road to high-quality development of enterprises, but enterprises need to reasonably plan the scale of digital input to achieve a sustained and stable increase in total factor productivity. For enterprises with a high level of digitization, it is necessary to rationally allocate enterprise resource inputs to ensure that the level of digital inputs is within a reasonable range, in order to avoid the occurrence of the phenomenon of “too little too late”, leading to the “digital input paradox”, that is, causing the total factor productivity to fall instead of rising. In order to avoid the phenomenon of “overdoing it”, which leads to the “digital input paradox”, i.e. the result of total factor productivity falling instead of rising. For enterprises with a low level of digitization, digital input has the role of “more is better”, enterprises need to increase digital input to promote the speed of the digital development process, which in turn promotes the high-quality development of enterprises. (2) Pay attention to the heterogeneous impact of digital input on enterprise total factor productivity. Due to the heterogeneity of the non-linear impact of digital inputs on enterprise total factor productivity, enterprises with different characteristics should adopt differentiated coping strategies. For non-high-tech enterprises, non-state-owned enterprises, and enterprises in regions with a low level of marketization, there is no significant non-linear relationship between digital inputs and enterprise total factor productivity, and the current situation is still on the left side of the inflection point, i.e., the impact of digital inputs on enterprise total factor productivity is a facilitating effect. At this stage, for non-high-tech enterprises, non-state-owned enterprises, and enterprises in regions with a low level of marketization, it is necessary to accelerate the digital transformation and give full play to the positive role of digital input elements in the process of high-quality development of enterprises. (3) Promote the optimization of the external environment for the digital development of enterprises. On the one hand, since digitalization inputs can affect the total factor productivity of enterprises through financing constraints and agency costs, the policy level should create a better external financing environment for enterprises, attract more investors to pay attention to and support enterprise digitization, and provide sustainable conditions to support enterprise digitalization inputs. On the other hand, we should pay attention to the synergistic matching between different environmental factors. Although the inflection point of digitalization investment is still far away for most enterprises, we should continue to improve the “threshold value” of digitalization investment that may produce negative effects, so as to create a good external environment for the development of enterprise digitalization.

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A Study on the Influential Factors of Women Canoeists' Cross-border Transdiscipline-Based on Rooted Theory

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Abstract

The article explores the influencing factors of women kayakers' participation in cross-border cross-training based on rootedness theory, coding the raw interview data of the interviewees in a hierarchical manner, refining the initial concepts, basic categories, main categories, and categories, and attributing the decision-making of women kayakers' participation in cross-border cross-training to the east winds of the policy, developmental constraints, perceived value, social support, personal interest, and perceived risk. Among them, policy easterly wind is a macro-environmental factor, developmental constraints are external constraints, perceived value is a personal cognitive factor, social support is a social-environmental factor, personal interest is an intrinsic motivational factor, and risk perception is a risk-assessment factor. The study not only provides academics with insights into the decision-making mechanisms of women kayakers, but also offers substantial guidance and insights for policy makers, coaches, family members, and women kayakers themselves.



Full Text Article



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Keywords: cross-country crossover; influencing factors; female kayakers; rootedness theory

Introduction

In the 1980s, the 'transfer' and 'cross-training' training methods were applied to the training and competition practices of high-level athletes in some countries or regions, and achieved certain results (Collins et al., 2014; Dehghansai et al., 2023; Sæther et al., 2021; Li Yong Ming et al., 2018). After Halson's research report on alpine skiing to track cycling in 2016, the term "cross-selection" was officially used (Gao et al., 2024; Halson et al., 2006; MacNamara & Collins, 2015). With the experts and scholars in China's sports sector launched a multi-faceted and in-depth study of athletes' performance, the term "cross-cross" was proposed on the basis of the convergence of related theories of kinesiology, training, and skills (Xia Jiao Yang et al., 2021). As one of the strategies for the d

development of competitive talents in the new era, cross-border cross-sports is the path innovation of competitive sports selection mode(Wang A Ting et al., 2019). The policy-driven and institutional support at the national level is the guarantee for athletes' cross-border cross-training. China's State General Administration of Sport has begun to pay attention to and propose relevant policies as early as 2017(General Office of the General Administration of Sport on the organisation of the 'cross-border cross-discipline selection' seminar notice_General Administration of Sport, n.d.). For example, in March 2017, the General Administration of Sport of China 'Notice on Carrying Out the National Winter Project Cross-border Cross-discipline Selection Work' (Interdisciplinary selection for the Winter Olympics 'full participation' solid foundation _National Sports Administration, n.d.) 'Overall Programme for Cross-border Cross-discipline Selection Work in Winter Project Preparation for the 2022 Winter Olympics' (The mobilisation and symposium on cross-discipline and cross-border selection for the preparation of national winter projects for the 2022 Winter Olympics was held in Beijing_Departmental Government_China.gov.cn, n.d.); and in August 2018, the General Administration of Sport of China 'Policy on Establishing a Cross-border Cross-discipline Athlete Sport Level Incentive System' (Circular of the General Office of the General Administration of Sport on the Establishment of Incentive Policies for the Levels of Cross-Discipline Athletes_State General Administration of Sport, n.d.). The application of cross-border cross-training breaks the single training mode of Chinese athletes to a certain extent, that is, when the development of the original project of the athlete is restricted, the athlete can find a suitable project through cross-border cross-training to realise their own value (Lin Ling et al., 2021). Cross-country cross-training has made a number of historic breakthroughs, achieving a historic breakthrough in the participation and competition results of some of China's sports from scratch(Zeng Cheng & Deng Xin Hua, 2023).

Academic research around the theme of athletes' cross-border cross-task, mainly focusing on cross-border cross-task selection(Guan Zhi Xun & Xue Lan, 2019; Jiang Zhi Yuan & Zhang Li Qing, 2019; Zhang Xin et al., 2018; Wang A Ting et al., 2019). For example, the doctrinal basis, practical logic and implementation path of cross-border cross-discipline selection in competitive sports; the research on the systematic implementation path of cross-border cross-discipline selection under the perspective of LTAD theory; the research on the key issues in the selection of volleyball 'cross-border cross-discipline' in China; the cross-border cross-discipline selection of the Beijing Winter Olympics: the achievements of the exploration, the experience revelation and the practice path. There are fewer studies on athletes' cross-border cross-sports(Li Zheng, 2022), and the research method is relatively single, mostly adopting the literature method, Telfair method and hierarchical analysis method (Yang Xin Rong, 2022), which is still in the discursive stage. On the whole, few studies have used the rooting method to conduct qualitative research on the influencing factors of cross-border cross-training for Chinese athletes. At present, the relevant research in kayaking in domestic academia mainly focuses on the project characteristics of kayaking itself, daily training, kayaking talent training, psychology, physiology and biochemistry(Yu Yin et al., 2023; Lu Xiao Chang & Lin Lin, 2012; Gao Ping et al., 2021). There are fewer studies on the participation of kayakers in cross-country sports, and the research on the influencing factors of women kayakers' cross-country sports is even more scarce.

Research significance

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In view of this, this study starts from the athletes' perspective and adopts semi-structured interviews with female kayakers to explore the influencing factors of cross-boundary cross-tasking of female kayakers in China through rooted theories, so as to provide scientific and theoretical knowledge for athletes, coaches, sports administrators, and policy makers, thus continuously adjusting the process of athletes' selection, and providing certain reference bases for the development of female kayaking programmes in China. This will provide scientific theoretical knowledge for athletes, coaches, sports managers and policy makers, so as to continuously adjust the athlete selection process and provide certain reference basis for the development of Chinese women's kayak programme.

Interview outline design, sample selection and data collection and processing

Interview outline design

This study conducted literature research and initially designed the interview outline before data collection, and adjusted the interview outline after pre-interviews with five female kayakers with cross-border cross-competitive experiences to finally form the formal interview outline. The interviews were conducted with four groups of people: women kayakers with experience of transferring to other disciplines on their own, women rowers with experience of transferring to other disciplines on their own, women athletes who are willing to participate in kayaking through cross-country sports, and women athletes who are willing to participate in rowing through cross-country sports. Interviews were conducted offline in semi-structured audio-recorded interviews.

Sample selection

The sample selection criteria for this study were as follows: 1. Meet the four categories of interview subjects; 2. Have certain language comprehension and expression ability; 3. Have time and willing to be interviewed. The sample was collected from 25 April 2023 to 9 September 2023 during the period when the China Canoeing Association held national tournaments and the national training team (water sports bases in Jiangxi, Zhejiang, Hubei, Guangdong, etc.), and 15 interviewees were finally selected as the sample of this study. The basic information is shown in Table 1:

Table 1 Basic information of female kayaker respondents

serial number	Surname	Genders	work unit	hierarchy	sports experience
F1	Shuai ××	women	Guizhou Water Sports Management Center	world-class athlete	Athletics, canoeing, rowing
F2	Xu××	women	Jiangxi Water Sports Management Center	world-class athlete	Rowing, kayaking, rowing
F3	Yu××	women	Guizhou Water Sports Management Center	national level fighter	canoeing, rowing

F4	Yin××	women	hejiang Water Sports Management Centre	national level competitor	canoeing, rowing
F5	Cheng××	women	Jiangxi Water Sports Management Centre	national level competitor	Kayak, dragon boat, rowing boat
F6	Xu××	women	Jiangxi Water Sports Management Centre	national level competitor	Kayak, dragon boat, rowing boat
F7	Ning××	women	Guangdong Provincial Water Sports Management Centre	national level	Kayak, rowing boat, dragon boat
F8	Xue××	women	Zhejiang Water Sports Management Centre	national level competitor	Kayak, dragon boat, rowing boat
F9	Lian××	women	Zhejiang Water Sports Management Centre	national level competitor	canoeing, rowing
F10	Liu××	women	Shanxi Water Sports Management Centre	national level competitor	Rowing, cross-country skiing, kayaking
F11	Zhu××	women	Zhejiang Water Sports Management Centre	national level	Sailing, kayaking, rowing
F12	Song××	women	Hebei Water Sports Management Centre	national level competitor	Rowing, cross-country skiing, kayaking
F13	Wang×	women	Yunnan Water Sports Management Centre	national level	Kayak, dragon boat, rowing boat
F14	Wang×	women	Zhejiang Water Sports Management Centre	national level competitor	Kayak, dragon boat, rowing boat
F15	Yu××	women	Zhejiang Water Sports Management Centre	world-class athlete	Rowing, cross-country skiing, kayaking

Data collection and processing

In order to create a relaxed and favorable interview atmosphere and to understand the real feelings of the interviewees, in addition to the core questions, different questions were asked during the interviews according to the actual situation of the interviews. At the same time, in order to ensure the reliability of the data, the audio data were converted into text data in a timely manner after the interview.

views, and the text data were corrected and refined by the interviewees, which were finally organized to form 15 pieces of text data named after F-X.

Scope refinement and content construction

Open coding

Open coding is the process of decomposing, comparing and categorizing the collected raw data. By selecting statements with higher frequency of concepts and more concentrated category clustering, the refined statements with normal distribution were screened out as the original data for category refinement. In this open coding exercise, 25 categories were sorted out for eligible female kayakers, and the specific coding content is shown in Table 2.

Table 2 Open coding of women kayakers' cross-border crossover events

Initial scope	Initial concepts	original statement
Policy support	Policies are promoting active participation in cross-border cross-subjects	In order to promote the rapid development of women's rowing, the domestic canoeing program has carried out a series of race reforms in those years, which will give some policy support to cross-discipline athletes, and most of the athletes around me have gone to participate in the cross-discipline women's rowing training. All the policy opportunities, if as a coach to consider, when the policy favors which program, I will certainly choose to focus on the development of which program.
Policy incentives	The State provides certain material incentives to cross-border athletes.	We can only say that on the basis of the original material to give you some policy incentives, such as getting the top three in the country to give you what incentives, so that you will go across, right? If nothing is given to you, will you be willing to cross?
policy inclination	Driven from above and required by policy	Your own municipalities or provinces for this program is not to give the greatest support, you do not have to support who engage in this project. For example, training equipment and other things need to be supported, is not it? There is also a policy support similar to the package allocation
policy protection	Policy push to give guarantees to return to original project	It is still mainly a matter of policy. For the sake of policy and social development, we are definitely willing to dedicate ourselves to society and choose to participate in cross-border crossover projects.
limited by one's gift	The original program wasn't a good fit for me.	Whether or not I'm a good fit for the program I'm in depends on my own situation, and it's definitely important to choose a cross-border crossover direction in line with my own specialties and characteristics area.
development	The original program	If there is a bottleneck in my level of athleticism in the sport

bottleneck	m has been practicing for years without a breakthrough.	rt I was originally working on that I may not be able to break through for 1-2 years, I choose to go crossfit and try a new sport.
Injuries and illnesses have hampered	Injuries recur from time to time, making it difficult to keep up with a systematic training routine	At the time, I crossed over because I had a recurring knee injury that made it difficult for me to keep up with my training routine.
Maslow's hierarchy of needs	The original program has not been well developed and self-worth has not been realized	If the new program can bring me higher achievement, or challenge a higher platform to prove my self-worth. Challenging the highest platform and realizing self-worth is actually a phrase, like there are some track and field athletes who have only reached the level of the second level, and they can only go to a university, but if he switches to water sports, then he can't say that he can still be in the team, and he can also do other things, so won't he realize his self-worth?
Development Opportunities	Crossing over to a new program brings me to a higher level of achievement.	At that time, the province was going to make a big effort to develop women's rowing as an emerging sport, and I felt it was an opportunity to try to break through what I had achieved in the kayak program.
Seeking a breakthrough	Trying to break through your existing performance through cross-competitions	I felt that the original program was not suitable for me, and it was very difficult for me to achieve results, so I decided to try a new program. At that time, after practicing for two years, I didn't get any results, and I originally wanted to give up and go back to school, but thinking about the fact that I had been practicing for so many years, it would be a pity if I quit in the middle of the year, so I tried the cross-border cross-country program.
recognition by others	Recognition from friends and family for my crossover crossovers	After crossfit, my foreign coach at the time helped me a lot, both in training and competitions, he was very optimistic about me and gave me motivation.
Coaching Guidelines	Coach will consider whether to do cross-country from the perspective of my own development.	The coach guided me to switch to the women's rowing program, when he encouraged me that women's rowing was an emerging program, and also more suitable for my development and better results. Is not your own program coach's willingness. If your coach doesn't agree with you, how can you do it? Family support, coach support, my coach said this is good, there is no doubt. Just like Xu Shixiao she came back to practice, coach Peng is not to give the main support.
Friends and family support	Support from family and friends for me	At that time, our senior sister thought I was perfect for rowing and recommended me to try it, and then my family was

	y involvement in cr oss-border cross-co untry programs	fully supportive of my decision, so I had no worries.
financial ince ntive	Participation in cro ss-border cross-pro gramming can be re warded with a certa in amount of remun eration.	At that time, the program we crossed could more easily ach ieve good results in the country, like our unit would give jo b assignments after retirement if we got the top three place s in the country.
inquisitive	Curiosity about cro ss-border crossover s	I think the reason I would cross over is my internal motivat ion, a new program is definitely more directionally oriente d than the one I'm currently practicing, or even a new progr am for me that I've never been in before, and it will give m e a sense of freshness, direction, and it will help me realize another value, or help me get something
one's own em otions	Personally, I'm inte rested in cross-bord er crossover progra ms	Do I like or dislike the program, if you pick people who do n't like the water to paddle, then they won't want to, so man y athletes in track and field don't like water sports. In fact, similar to their own favorite, it can affect my motivation to participate. A motivation is big, you will want to practice, can go to practice, you will not want, how will you go to At the time I thought I'm going to be with my teammates a nd I can't run off to rowing practice by myself because they 're still practicing kayaking, so I turned down crossfit. At t he time, my teammates who were playing well around me were going to cross-cross and I just really wanted to go wit h them.
tendency foll ow the crowd	Friends in the neigh borhood are involv ed in cross-border c rossovers	
willingness t o experiment	Loves to try new th ings	If I was younger at the time, I would definitely still be willi ng to try a little more for the future
development concern	Feeling abandoned deep down.	At the time the coach suggested I go to a different progra m, I had a feeling he had given up on me and wanted me to go to a different program.
development concern	Concerns about the prospect of particip ating in cross-borde r cross-projects and the development of the original project	It's to give me some security in my back pocket, or if I swit ched programs, I wouldn't go if I didn't have this possibilit y of being able to go back to my original program at any ti me
Occupational risk	Concerns about fut ure employment thr ough cross-border i nterdisciplinarity	At that time I was just told to cross the program, I did not c ross. At that time, didn't they say that all female leather ath letes after '97 had to cross women's rowing, and I just refus ed because I had already achieved a little bit of success on my own at that time, and then the foundation that I had laid

Motivation for capacity enhancement	Cross-country can improve one's athletic ability	in the original program was here, so I wouldn't want to cross the program! I think cross-country is an opportunity for me, it provides a higher platform and exposure to higher level athletes, and who doesn't want to become a better version of themselves. If an athlete has a need, such as a desire to continue to develop or make a breakthrough, he or she will definitely be willing to try cross-discipline!
altruistic motivation	Being able to help others through participation in cross-border cross-curricular activities	I believe that cross-border sports can help the interoperability between programs, promote the faster development of programs, and provide more choices and opportunities for the development of outstanding athletic talents. At that time, both emerging and disadvantaged Olympic programs were in urgent need of reserve talents, so if I could make some contribution to the development of national sports through my efforts, I think it is very meaningful.
Motivation for career development	Participation in cross-border cross-curricular activities can lay the foundation for future employment.	I would choose to cross over if the program would make me more employable in the future, including some career advancement later on.

Spindleability coding

The main axis coding was divided into two steps: 1. Refining the main categories, integrating the 25 initial categories into 7 main categories; 2. Categorizing the main categories. The seven main categories were classified into policy east, developmental constraints, perceived value, social support, personal interest, risk perception, and behavioral motivation, as shown in Table 3.

Table 3 Principal axiality coding of women kayakers crossing over to cross disciplines

maincategory	subcategory	Connotation of scope
policyleeway	PolicySupport	The state gives cross-border cross-discipline athletes certain policy support; material incentives; our provincial and municipal units attach great importance to cross-border cross-discipline talent cultivation; the policy gives the guarantee of returning to the original program
	Policy Incentives	
	Policy Preferences	
	Policy Guarantees	
Constraints on development	Talent constraints	My original program is not suitable for my development; I haven't made any breakthrough after so many years of practicing in my original program; my injuries come back from time to time, so it's hard for me to ensure my daily systemati
	Developmental bottlenecks	
	Injuries and illnesses	

	ses	c training.
perceived value	Self-actualization Development Opportunities Seeking breakthroughs Recognition Coaching Guidelines	Crossover can provide a platform to realize my self-worth; Crossover will be a better development opportunity for me; I feel that my original program is not suitable for me and it is very difficult for me to achieve results, so I decided to try a new program; Crossover can help me find a sense of belonging and get the recognition of other people
social support	Family and Friends Support Financial Incentives Fresh and Curious	Coach's family and friends are very supportive of my involvement in cross-country; involvement in cross-country will allow me to earn more salary incentives
personal interest	Self-emotion Tendency to follow the crowd willingness to experiment	Freshness and curiosity about a certain sport, own interest and love for a certain sport, friends around you are going to participate in cross-country cross-training, want to try more sports finally choose cross-country cross-training
risk perception	perceived Abandonment Developmental Concerns Career Risks	When my coach suggests that I switch sports, I feel as if he has already given up on me; I am afraid that if I fail to succeed in my new sport, the development of my original sport will be delayed, and I will end up with no results on either side of the fence; I am worried that my athletic career will be delayed if I re-engage in a new sport.
Behavioral motives	Competence Enhancement Motivation Altruistic Motivation Career Development Motivation	Cross-country can help me break through my current performance; cross-country can contribute to the development of national sports; cross-country can improve my self-confidence in my career.

Selective coding

Selective coding was used to construct the core categories of women canoeists' participation in cross-border cross-country, and to analyze the structure and connotation of the relationship between the core categories and the main categories. By integrating the seven main categories obtained from the principal axis coding, and finally incorporating the seven main categories into the S-O-R model, the theoretical framework of the influencing factors of women kayakers' participation in cross-bord

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er cross-training was obtained, as shown in Table 4.

Table 4 Selective coding of women kayakers crossing over to cross disciplines

S environmental stimuli	O Individual status	R Individual response
Policy East Wind		
Development constraints		
Perceived Value	Behavioral motives	Willingness to participate
Social Support		
Personal Interest		
Perceived Risk		

Theoretical saturation test

To ensure good reliability and validity of the research categories, after completing open coding, s pindle coding, and selective coding of 12 female kayakers' participation in a cross-border cross-cate gory event, this study recoded the interview data of three female kayakers who had not participated in the coding previously in the same form, and the results did not reveal any new constructs, categor ies, or structural correlations, which indicated that the female kayakers' The modeling of influences on participation in cross-border interdisciplinary events was complete and saturated.

Analysis of Factors Influencing Women Canoeists' Participation in Cross-Country Cross-Disciplines

The present study investigates the factors affecting women kayakers' cross-border participation in cross-country sports, covering multiple dimensions from the macro policy level to the individual's heart level. Through careful analysis of policy, developmental constraints, perceived value, social s upport, personal interest and perceived risk, we explain the combined effects of these factors in diff erent environmental and psychological contexts, which in turn shape the career paths of women kay akers and their cross-discipline participation decisions.

Policy dongs refer to various preferential policies developed by governments and sports organizat ions to promote women kayakers. Policies can encourage athletes to explore new sports through inc entives or the provision of additional resources, and play a key role in the strategic and long-term pl anning of sport program development. These policies can include the provision of specialized traini ng facilities for women kayakers, increased funding for programs for women kayakers, and the esta blishment of incentive programs for women kayakers. Government funding and sports organization s may incentivize women kayakers to try new events and increase their cross-border cross-disciplin e participation. Policy support may lower the financial and resource barriers to participation in new programs and increase the likelihood of cross-border cross-sport participation among women kayak ers. For example, Wang XX mentioned in the interview that it is mainly a policy issue, and for the s ake of the policy and the development of the society, we are definitely willing to dedicate ourselves to the society and choose to participate in cross-border cross-tournament. If there is no policy pressi ng, it is for the prize money. The State General Administration of Sport and other administrative de

partments have introduced a number of policies and established horizontal synergy mechanisms and vertical mobilization mechanisms in order to open up channels for the delivery and growth of cross-border cross-sport athletes.

Developmental constraints relate to the challenges faced by female athletes in sport, such as resource constraints, inadequate training opportunities, and gender discrimination. Insufficient resources may lead female kayakers to look for other programs as alternative paths or turn to other programs in pursuit of better development opportunities. For example, Cheng xx believes that from my perspective, if I really cannot practice and have run out of development on this side of the original program, then I will only choose to switch to another program to seek development.

Perceived value is an athlete's perception of the personal and professional value of cross-discipline participation. From an athlete's perspective, participation in a cross-border cross-sport sport can be perceived by the athletes themselves as affecting skill enhancement, increased exposure, and improved competitiveness. Athletes may perceive participation in a new sport as providing challenges and learning opportunities that enhance their competitiveness in the sport. A LUxx women's kayaker believes that if the new program can bring me to a higher level of achievement, or challenge me to a higher platform, and be able to get more opportunities to compete with world competitors and improve my competitiveness. I will definitely give it a try.

Social support includes encouragement and support from family, coach, team and social media. From an athlete's perspective, social support may provide athletes with the necessary emotional and resource support to help women kayakers overcome the difficulties and challenges of the cross-border interdisciplinary process. Strong social support may increase the self-confidence and motivation of female kayakers and help them remain resilient in the face of challenges. Family support can reduce athletes' psychological pressure, and coaches' guidance can help them better adapt to the new program. For example, Liu xx believes that the leaders, coaches and leaders supported me to participate in cross-border cross-discipline, so I successfully switched from cross-country skiing events to women's kayaking. If I choose to do it myself, I don't think I would think about cross-country sports in general.

Personal interest is an athlete's personal preference and passion for a new sport or cross-border competition. Interest may be the main driver for athletes to explore new programs and push their limits. Women kayakers will choose whether to participate in cross-border competitions based on their personal interests and passions, i.e., when women kayakers are interested in a new sport, they may be more proactive in seeking related training and competition opportunities. For example, Ning XX mentioned in the interview that she chose the never-experienced and more difficult paddling program because of her interest in extreme challenges and curiosity about new programs.

Risk perception involves the awareness and assessment of the risks that may be associated with participation in a new program by female kayakers. Risk perception may influence an athlete's mental state and ultimate decision making. Athletes weigh these risks as a way of deciding whether or not to participate in a kayaking program through cross-border crossover. If the risks are too high, they may choose not to participate. For example, Yang xx mentioned in the interview, do all women kayakers after '97 have to cross women's paddling programs, and I just refused because at that time I already had a bit of success on my own, and then the foundation that I laid in the original program was here, so I wouldn't have wanted to go cross-cross-curricular.

Conclusion

Through semi-structured interviews and the use of rooted theory research methods, this study attempts to construct a model of the influence of women kayakers' participation in cross-border cross-country from the athletes' perspective, and draws the following conclusions. First, the six main categories of policy, developmental constraints, perceived value, social support, personal interest and perceived risk have an impact on women kayakers' participation in cross-border cross-training, with behavioral motivation as a mediating variable. The six main categories influence women kayakers' willingness to participate in cross-border cross-training through mediating variables. Among them, the policy wind is a macro-environmental factor, which involves policies at the level of government and sports organizations, and has a direct impact on the career development of women kayakers. Limited development is an external constraint, involving resource allocation, training opportunities and other external limitations, which affects athletes' development space and choices. Social support is a social environment factor, involving support from family, coach, team, etc., which positively affects athletes' psychological and career development. Personal interest is an intrinsic motivation factor that stems from athletes' personal preferences and passions, driving them to explore new areas and challenges. Risk perception is a risk assessment factor, originating from the sport and the subjective assessment of the potential risks of new programs, which affects their decision-making to participate in cross-border cross-sports. Secondly, perceived value, personal interest, and risk perception are direct factors that influence women kayakers' decision-making to participate in cross-border cross-training; while policy easterly winds, social support, and developmental constraints are indirect factors that indirectly influence women kayakers' decision-making to participate in cross-border cross-training by influencing the external environment and resource allocation. Even the best policies can only be effective if they are implemented by individuals. Social support and risk perception can influence women's participation in cross-country decision-making, accumulating quantitative changes, while the final qualitative changes need to be decided by individuals.

In this study, semi-structured interviews were conducted with female kayakers, and based on the athletes' perspectives, a model of the influencing factors of female kayakers' participation in cross-border interdisciplinary sports was summarized from the rooted theory of sports, with a focus on how the policy winds, developmental constraints, perceived value, social support, personal interest, and risk perception affect the behavioral choice of cross-border interdisciplinary participation of female kayakers to provide intellectual support for athletes, coaches, sport administrators, and policy makers. administrators, and policy makers with intellectual support. There are some limitations in this study: first, the interview sample source is not sufficiently global, and a larger number and wider distribution of research studies are needed. Secondly, this study lacks the cross-country investigation and analysis of women kayakers' participation in other sports, and fails to completely outline the psychological benefits of women kayakers' participation in cross-country cross-country sports, which requires further in-depth and extended research in the future.

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Conflict of Interest

The authors declare no conflict of interest.

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Analysis of the Current Status of China's Digital Trade and Exploration of Countermeasures

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Abstract

As the development of digital trade becomes increasingly prominent in China, The current status, main problems and countermeasures are analyzed in this paper. This article will begin by looking at the potential advantages of China's digital trade: market size, policy support, technological development infrastructure and industry innovation. The second part focuses on some of the problems within digital trade development, for example the less developed cross-border payment system, insufficient intellectual property protection, lagging regulation and data security concerns. In response to the challenges mentioned above, this paper proposes countermeasures in six aspects: Strengthening the legal and regulatory framework for digital trade; Developing cross-border payment facilitation; Promoting the digital transformation of small and medium-sized enterprises; Enhancing data security and privacy protection; Taking an active part in international rules formulation; Shifting policy towards emerging technologies research and development. In conclusion, this article was created to provide some theoretical guidance and policy suggestions for China digital trade sustainable development continue to improve the global digital economy position.



Full Text Article



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Keywords: Digital Trade, Policy Support, Intellectual Property

Introduction

As the global information technology develops in leaps and bounds, the digital economy is now a top spirit that boosts economic transformation across the globe. Digital trade is one of the most important pillars of the digital economy and has a deep impact on international commerce [1]. Digital trade encompasses the cross-border flow of goods, services and data enabled by e-commerce platforms, digital payment systems and information technologies. China has made significant strides over the previous few years in terms of digital infrastructure, growth of e-commerce, and the innovation of cross-border payment systems. As a result, its scale of digital trade has grown rapidly

and become more and more integrated into the global market. On the other hand, there are still many problems in relation to the data security, oversea management supervision, technology standards and human resources for cross-border e-commerce development within mainland China. However, these challenges have also created bottlenecks that hold back the continued development of China digital trade.

In terms of policy, the Chinese government has placed significant emphasis on the development of digital trade. The favorable condition of the digital trade growth was influencing national policy support and international cooperation since Belt and Road Initiative is introduced. Concrete Resources for the Development of Digital Trade The publication of policy documents such as the 14th Five-Year Plan for Digital Economy Development have given digital trade a major incorporeal boost by granting it strategic guidance and support. In addition, China has engaged in the creation of international digital trade rules which emphasize cross-border e-commerce and data flow facilitation. These policy approaches help to reinforce China in the global digital trade race.

The purpose of this study was to analyze the development status, existing problems, and related strategies of digital trade in China. First, it reviews the overall development process and current situation of China digital trade regarding general characteristics as well as growth trends. Secondly, it examines the key challenges preventing digital trade from progressing and what is behind them. Last but not least, this study suggests that it will provide targeted improvement measures for reference for the sustainable and healthy development of China digital trade [2].

The Connotation of Digital Trade

Digital Trade in the Digital Economy: Digital trade is an essential component of the digital economy, encompassing the production, distribution, and consumption of goods and services enabled by information and communication technologies [3]. Unlike traditional trade, digital trade significantly alters transaction methods, trade objects, and industry frameworks by harnessing digital technologies. It can be understood through three key aspects:

First, the broadening of trade participants. Digital trade transcends traditional business models, enabling individual entrepreneurs, small and medium-sized enterprises (SMEs), and even consumers to participate in global trade. This shift fosters a “disintermediation” approach to transactions.

Second, the digitization of trade goods. Digital trade includes not only tangible products but also intangible assets such as software, data, and digital content. This expansion creates new opportunities within the digital economy but also raises challenges for intellectual property protection and regulatory systems.

Third, the move towards paperless and automated trading. Technologies like cloud computing and blockchain facilitate smooth online operations, streamlining everything from order creation to payments, logistics, and after-sales services. This transformation improves efficiency and reduces the cost of cross-border transactions [4].

Moreover, data is pivotal in digital trade. It supports businesses in analyzing consumer behavior and market trends, helping them better meet demand. In conclusion, digital trade represents more

than just changes in transaction methods—it leads to profound transformations in global supply chains, industries, and consumption patterns.

Characteristics of Digital Trade

Digital trade refers to cross-border transactions of goods and services enabled by e-commerce and digital technologies, with data and information serving as its foundation [5]. It extends beyond the online exchange of physical products and services to include data flows, the digital management of intellectual property, online service delivery, and the supporting digital infrastructure. Digital trade represents a significant development in modern trade models, primarily manifested in the following aspects:

Digitization of Transaction: Digital trade is conducted through the internet and electronic platforms, eliminating the need for physical contact and breaking the limitations of time and space. The application of technologies such as online payments, smart contracts, and block-chain further reduces transaction costs and enhances efficiency. The digitization of transaction methods involves several detailed features: E-commerce platforms provide an efficient transaction environment, encompassing functions such as product display, information inquiry, and user reviews, enabling direct interaction and transactions between consumers and producers globally. Digital payment methods (such as credit cards, third-party payment platforms, and cryptocurrencies) have replaced traditional cash payments and bank transfers, streamlining cross-border payment processes. The digitization of transaction methods also extends to the transformation of logistics and supply chains. Through the Internet of Things (IoT) and big data, businesses can track the status of goods in real-time, optimize inventory management, and make precise predictions and decisions based on data analysis. Additionally, the internet enables both parties in trade to instantly share and receive large volumes of data, such as product specifications, logistics status, and order information, significantly reducing the time cost of information transmission.

Diversification of Trade Objects: This reflects the deep integration of digitization and information technologies into economic activities, broadening the types and forms of goods and services in traditional trade. Compared to traditional trade, digital trade is not limited to the circulation of tangible goods but also includes a wide range of intangible assets and virtual products. For example, typical intangible products include software, e-books, online music, videos, and applications, which can be transmitted instantly over the internet, overcoming the physical limitations of traditional goods transportation. Services such as online education, telemedicine, data storage, and cloud computing have also become cross-border offerings, providing convenient choices for consumers. Digital financial assets and virtual goods, such as non-fungible tokens (NFTs), are gaining popularity due to their uniqueness and traceability, giving rise to new markets for digital art, virtual real estate, and more. Services in the sharing economy, and ride-sharing (e.g., Uber), are also part of digital trade. Many traditional services have expanded across borders through digital forms, including consulting, training, and design. Businesses are no longer limited by physical offices; instead, they leverage the internet and digital platforms to expand globally. The diversification of cross-border service offerings has injected new vitality into digital trade.

Driving Force of Emerging Technologies: This refers to the profound transformation of digital trade's processes, efficiency, and models due to rapid advancements in information technology.

Emerging technologies have not only improved various stages of traditional trade but have also created entirely new business models, enriching the connotation of digital trade. Technologies such as artificial intelligence, big data, the Internet of Things (IoT), and blockchain provide substantial support to digital trade. These technologies optimize supply chain management and logistics, while also enhancing various aspects such as the execution of smart contracts and the storage and transmission of data. For instance, big data technology enables businesses to process and analyze massive amounts of consumer data, market trends, and user behavior preferences swiftly, allowing them to develop more accurate marketing strategies. Artificial intelligence-driven recommendation algorithms on e-commerce platforms offer personalized suggestions to users, increasing engagement and conversion rates. Blockchain technology, with its decentralized, tamper-proof, and traceable features, has great potential in areas like cross-border payments, supply chain management, and intellectual property protection. Cloud computing provides businesses with flexible IT infrastructure and computing resources, allowing small and medium-sized enterprises (SMEs) and cross-border e-commerce businesses to enter the digital trade market without bearing high equipment and server costs. With IoT technology, and the connection of devices/sensors you will now be able to monitor and manage goods, warehousing, and transportation in real-time. 5G networks offer a technological backbone for the globalization of digital trade, enabling low-latency and high-bandwidth data connections. VR and AR are some of the emerging technologies enabling new experiences in digital trade.

Data as a Core Element: In digital trade, data functions as both a transactional medium and a key resource. Its cross-border flow is central to digital trade but introduces challenges like privacy protection, data security, and sovereignty. For example, cross-border e-commerce businesses use consumer behavior and market data to predict sales trends, optimize supply chains, and minimize risks related to inventory and sales. E-commerce platforms analyze search histories and location data to provide personalized recommendations, improving product visibility and boosting conversion rates. Real-time tracking systems help businesses monitor goods in transit, addressing delays or risks promptly to ensure on-time delivery. The "just-in-time manufacturing" model uses data on individual customer needs to produce tailored goods, reducing inventory costs and increasing production efficiency.

Changes in Policies and Regulations: The growth of digital trade has prompted major adaptations in international trade policy and regulation. This exposes updated standards: for data flow, digital privacy and cybersecurity, as well as the free trade vs data sovereignty separation [6], [7], [8]. Cross-border data transfers represent a significant portion of digital trade, but in order to facilitate these efforts, they also risk exposing privacy and security. As a result, governments and regions passed regulations to protect data security and guarantee compliance. For instance, the EU had enacted a strict privacy standard-driven General Data Protection Regulation (GDPR), which requires companies dealing in data of EU Residents to meet significant control thresholds. Not only does this framework provide the governing use of cross-border data but also provides precedence to protect consumer rights of privacy. Likewise, China's Data Security Law and Personal Information Protection Law require compliance in minute detail from domestic and foreign parties with ever more stringent requirements on the manner data can be transferred outside of the boundaries of China. Such regulations are designed to be data secure while permitting its free flow, and they provide a reliable foundation for ongoing digital trade expansion. At the same time, the frenzied

pace of digital trade has posed its own unique challenges from a taxation and regulatory perspective. In response, various countries have developed creative tax policies and customs regulations. In this respect, dedicated cross-border e-commerce frameworks have been created to expand efficiency and enhance governance. And in some countries, specialized mechanisms for reporting online violations of intellectual property have been developed. These create systems to track down websites damaging digital products whilst bolstering law enforcement.

The Current State of Digital Trade in China

Digital trade in China has developed rapidly over the past few years and become an important engine to drive economic development and industrial transformation. China has become the global leader in this category by market size. The latest statistics show that total value of digital trade across the country has continuously risen, alongside cross-border e-commerce and digital service exports, in 2023. Alibaba, JD. Meanwhile, these twelve giants like Alibaba, JD. ☆. In addition, Chinese companies have achieved great market share in Southeast Asia and other regions through cross-border e-commerce platforms.

The second one is regarding to policy support that the Chinese government has provided through actively promoting the development of digital trade. The fourteenth five-year plan to develop the digital economy sets out specific objectives for promoting high-quality development in this field, noting the urgency of boosting exports of digital products and services while enhancing competitiveness globally. In addition, China has announced many cities as comprehensive pilot areas for cross-border e-commerce. The E-BTAs give specific policy incentives, such as tax relief and easier customs processing procedures, on the premise that there should be more participation of small- and medium-sized enterprises (SMEs) in international trade. This has created an environment resulting in the unprecedented growth of digital trade and a rapid bringing together of domestic and global markets as well.

Additionally, China has one of the best technology infrastructures in the world that contributes a lot to China's digital trade development. Sophisticated logistics networks, top-of-the-line 5G connectivity and smart payments all create a solid springboard for growth. Some examples include logistics providers like SF Express and Cainiao express, who are actively using big data and artificial intelligence to optimize operations — this led to shortened cross-border delivery times (as much as 1/1000) from a week down to only six or four hours. Likewise, the widespread adoption of international payment platforms such as Alipay and WeChat Pay will further help to facilitate global transactions. The penetration of these technologies and their deployment at scale has now confirmed China as the undeniable leader in digital trade.

The development of China has shown an important feature in the digital trade industry, that is innovation. Chinese companies have become world leaders in digital technology such as artificial intelligence, blockchain and cloud computing systems. These are being rapidly adopted in cross-border e-commerce, supply chain and digital finance sectors. Live-streaming sales and short-video marketing, for example, have seen impressive returns domestically in the cross-border e-commerce field and are spreading internationally. Such innovations create further prospects for growth, while raising the quantity and quality of digital trade itself.

China's digital trade is booming, but it still has some major obstacles to overcome. The same applies to the uncertainties that exist internationally concerning various regulations, as well as data security challenges. The diversity of cross-border data flow policies in various countries, together with the increasing rigor of domestic data privacy laws, has exacerbated compliance pressures on overseas businesses for Chinese companies. What is more, the rapid growth of digital trade has seen a renewed emphasis placed on intellectual property protection. This delicate equation between promoting technological innovation and protecting rights remains a great challenge that needs to be urgently addressed.

Challenges in the Development of China's Digital Trade

Although digital trade in China has grown rapidly, with its market size and technological advancements setting a global benchmark, significant challenges remain. One key issue is the lack of comprehensive policies and regulations [9]. As digital trade continues to expand, the need for robust legal frameworks to address data flows, privacy concerns, and cross-border e-commerce is becoming more pressing. However, China's current legal infrastructure is still developing in some areas. Some regulations are outdated and fail to keep pace with technological progress, leaving gaps in addressing the complexities of digital trade. For example, while the Data Security Law and the Personal Information Protection Law offer some direction on cross-border data flows, companies are faced with varying compliance requirements across regions. This disparity adds substantial management costs and operational challenges for businesses.

The second bottleneck is that the cross-border payment and settlement systems are not developed enough yet, thus resulting in the shut-in of China's digital trade to go global. Payment Solutions Alipay and WeChat Pay are used widely in China — however, they remain scarce internationally. China financial market opening & settlements — Some countries either forbid the Chinese payment systems or require local one, which will shorten cross-border utilization. Inflated exchange rate variability and expensive transaction fee further complicate matter; furthermore, the compliance complexity brings great risks and costs to businesses which make it inconvenient & unsustainable for digital trade.

Another major challenge for digital trade is insufficient protection of intellectual property. On the other hand, in recent decades with most key digital goods easily replicable and freely available on the Internet, including counterfeit goods among e-commerce imports, piracy contents, or violations of brand indications are common activities posing significant copyright infringement risks [10]. While China is stepping up the creation and protection of intellectual property, including regulatory measures "blacklists" already introduced in the electronic commerce sector, many disputes are still unsolved in global markets. Not only will harm the international image of Chinese enterprises, but also cut some way for limiting innovative digital products to enter the international market.

Additionally, the variation of digitalization practices within small and medium sizes enterprises (SMEs) are detrimental to the competitiveness of SMEs in China with respect to participating in digital trade. Although the Chinese government has launched a series of supportive policies, a large number of SMEs are still struggling with funding, technology and talent due to the high costs that digital transformation entails. The gap in international market development capabilities for SMEs is

larger, whereby they lack fundamental competencies in data analytics capabilities, Cross border marketing knowledge and Supply chain management processes among others. On the contrary, SMEs in developed countries are relatively more digitalized than those in China, which brings great pressure for Chinese SMEs to compete globally.

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Lastly, international differences in regulations impede cross-border flow of trade digitally. Countries have pursued increasingly different policies and standards on issues of cross-border e-commerce and data flows, among other things, making it difficult to turn efforts into coherent international regimes as the global digital economy has scaled up [11]. Such fragmentation forces Chinese companies to maneuver a patchwork of inconsistent, dynamic regulations that include tariffs, data protection law, and tax regulations—each risk added upon another further raising operational uncertainty. Furthermore, as China-U. In the wake of U.S. trade tensions, some have gone so far as to impose barriers on Chinese digital companies, which only adds to the unpredictability and challenges such firms face in international markets.

Recommendations for China's Digital Trade Development

In view of the new situation and challenges facing China digital trade development, we offer policy recommendations to boost its high-quality and sustainable development:

Roadmap to the regulation of digital trade policies In order to solve the problems like cross-border data flow, privacy protection and compliance in cross-border e-commerce, China should speed up the formulation and improvement of relevant laws [12]. To adhere more closely to the international norms, guidelines for cross-border data flows should be developed that strike a balance between data security and privacy protection objectives on the one hand and cost-effective, state-of-the-art facilitation of compliance procedures required by business activity on the other hand. In addition, the E-Commerce Law and Intellectual Property Protection Law should be tightened up to discourage infringement and counterfeit goods in cross-border e-commerce so as to create a sound and competitive market environment for digital trade.

A system of data security standards should be built with Chinese characteristics which would take into consideration various needs for data privacy protections from different countries. To strengthen the supervision and administration powers of cross-border data flows, which threaten individual security, the Government may establish one or several specialized regulatory organizations responsible for defending the consumers' personal data. Simultaneously, businesses ought to be incentivized to utilize higher levels of data encryption and storage technologies so that

they have a strong defense against data breaches and cyberattacks, increasing the confidence of consumers for digital trade. In addition, data security awareness should be improved to enable consumers to correctly understand and advocate policy for data privacy protection.

Both international cooperation and active engagement in the elaboration of global rules for digital trade need to be reinforced as well. Given the rapidly growing international competition among digital economies, China should actively participate in multilateral negotiations on digital trade to create global rules—especially for multilateral arrangements such as the Digital Economy Partnership Agreement (DEPA). Working together with major economies, China can seek cooperative mechanisms on cross-border flows of data, protection of intellectual property rights and taxation which would lower institutional costs in digital trade and provide a more predictable policy environment for Chinese firms to open up new market frontiers. In addition, with regard to technological blockades under the China-US trade friction situation, the influence of global digital trade for such physical commodity should tend to dedicate further efforts in independent innovation and less dependent on external technology.

Finally, we should strengthen the investment of emerging technologies in research, development and application to stimulate upgrading of digital trade industry chain. Technological innovation strongly influences the development of digital trade. This means, for example, that more R&D investment should be made in AI, Blockchain, cloud computing and 5G in core areas of digital trade including data analytics, intelligent logistics and cross-border payments to upgrade trade efficiency through technology improvements. But for example, by encouraging the implementation of blockchain technology in supply chains we would have a more open and safe trade information system. Therefore, promoting intelligent logistics research and enterprise will boost the efficiency of logistics as well as their quality, meeting globalization demands with ease.

Conclusion

China's digital trade, as a participant in the world digital economy, has developed rapidly in recent years and is gradually becoming an important engine for promoting China's high-quality economic development. But this rapid development is also accompanied by a lot of challenges and problems within digital trade. An overview of China digital trade status: Based on the analysis above, this paper first reviews the current state of China's digital trade including advantages (such as large-scale market size, ample policy support, advanced technological foundation and proactive innovation in key industries) as well as problems needing to be solved (such as cross-border payments, intellectual property protection in e-commerce and absence of relevant regulations). Based on the comprehensive analysis of these issues, this paper puts forward relevant countermeasures from enhancing the policy and regulatory system to promoting cross-border payments, accelerating the digital transformation of small and medium-sized enterprises, strengthening data security and personal privacy protection, taking an active part in making international rules as well as increasing investment in research and development of cutting-edge technologies. Such measures will facilitate China digital trade not only overcoming existing bottlenecks but also becoming more global competitive by inserting itself more into an integral part of the international trade system.

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The Impact of Historical Nihilism on the "Four-sphere Confidence" of University Students and Countermeasures

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Abstract

The trend of historical nihilism, accompanied by "information fragments", has invaded the ideological defenses of university students. Under the guise of "rational thinking" and "reevaluation", it sets theoretical traps, writes revisionist articles, distorts history, and questions the path, theory, system, and culture of socialism with Chinese characteristics, significantly impacting the "Four-sphere Confidence" of university students. In this context, it is urgent to explore countermeasures to get rid of the impact of historical nihilism on the "Four-sphere Confidence" of university students, forming a powerful synergy to resist this trend and guide university students in strengthening their "Four-sphere Confidence".



Full Text Article



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Keywords: Historical nihilism; University students; "Four-sphere Confidence"

Introduction

The report of the 20th National Congress of the Communist Party of China pointed out that misguided patterns of thinking such as money worship, hedonism, egocentricity, and historical nihilism were common, and online discourse was rife with disorder. All this had a grave impact on people's thinking and the public opinion environment. [1] In the 21st century, driven by the economic globalization, the trend of historical nihilism intertwined with other diverse social ideologies like neoliberalism has profoundly impacted the "Four-sphere Confidence" of Chinese university students and caused them to waver. Therefore, it is crucial to deeply analyze the erroneous orientations of historical nihilism and investigate its impact on the "Four-sphere Confidence" of university students, as well as to explore countermeasures to eliminate its impact, which has profound value implications.

Organization of the Text

1. The Erroneous Orientation of the Historical Nihilism

Historical nihilism is a typical historical idealism, characterized by isolated interpretations, one-sided examinations, and misrepresentations of facts. It downplays the truth and denies the objectivity of history, questioning the path, theory, system, and culture of socialism with Chinese characteristics.

1.1 Questioning the Necessity of the Path of Socialism with Chinese Characteristics

The issue of the path is a fundamental problem of historical nihilism, which is essentially an erroneous answer to the question of which path China should take. Practice has proved that the path of socialism with Chinese characteristics is the choice of history and the people. Historical nihilists attempt to erase the profound impact of the Chinese revolution and challenge the legitimacy of the socialist path, relentlessly attacking the leadership role of the Communist Party of China and negating the achievements of socialism with Chinese characteristics, revealing a dangerous attempt to promote Westernization. Secondly, they disregard the historical contributions of the Revolution of 1911, the New Democratic Revolution, and the War of Resistance against Japanese Aggression, falsely asserting that choosing socialism is a series of missteps, a stance not only absurd but also deeply harmful. Furthermore, historical nihilists use the setbacks China faced at the inception of the People's Republic of China, propagating the notion that socialism has reached its end. They exaggerate the setbacks in Chinese modern history while ignoring the remarkable achievements of socialist construction. At the same time, historical nihilists leverage various lectures and publications to indoctrinate university students with the idealized image of capitalist societies. Out of curiosity, many university students begin to identify with capitalist development models amid the rampant spread of historical nihilism, which inevitably undermines their shared ideal of socialism and shakes their confidence in the socialist path.[2]

1.2 Questioning the Scientific Nature of the Theoretical System of Socialism with Chinese Characteristics

The theoretical system of socialism with Chinese characteristics, as a scientific truth repeatedly tested by practice, not only addresses key theoretical and practical issues in China's development but also provides profound guidance in both worldview and methodology. This theoretical system stands in sharp opposition to historical nihilism. Historical nihilists attempt to negate Marxism by labeling its historical perspective as rigid dogma or even derogatory derivatives of religious doctrines. They seek to confuse the public's understanding of historical nihilism and launch attacks on Marxism out of context, thereby undermining the foundations of its mainstream ideology. The harm of historical nihilism lies not only in its deceptive nature; its deeper intention is to weaken the younger generation's belief in Marxist theory. Under the control of certain domestic and international forces, attacks are launched on the theoretical system of socialism with Chinese characteristics through bribing agents and other means. Internet platforms like Weibo, Baidu Tieba, QQ, and WeChat have become platforms for spreading so-called "truth revelations", distorting and hyping Chinese history. This phenomenon is not just an overflow of online public opinion but has also permeated higher education. Extreme cases have emerged where university classrooms openly question Mao Zedong Thought and socialism with Chinese characteristics. Such behavior not only

desecrates academic ethics but also influences students' development of a correct worldview, outlook on life, and values. Undeniably, historical nihilism aims to destroy the ideals and beliefs of young students, eroding the contemporary influence of Marxism, and causing university students to lose solid support in theoretical guidance and spiritual reliance, with its erosion of their theoretical confidence not to be overlooked.

1.3 Questioning the Superiority of the System of socialism with Chinese Characteristics

The system of socialism with Chinese characteristics is the greatest advantage and institutional guarantee for China's development today, as well as the steadfast force of self-confidence and self-reliance. [3] Historical nihilism questions the superiority of this system in two ways. On the one hand, historical nihilists completely negates Soviet history, criticizes the October Revolution and the socialist system it produced, ignores the complex and diverse historical reasons behind the drastic changes in Eastern Europe, and selectively disregards the "color revolutions" implemented by Western capitalist countries. Instead, historical nihilists unfairly blame everything on communism, claiming that capitalism triumphed over communism in Eastern Europe. On the other hand, they attempt to leverage various contradictions and problems that arose during China's reform and opening-up as points of attack. With reform and opening-up, China has inevitably encountered issues such as a wide gap between the rich and poor, corruption and bribery, environmental pollution and food safety that society must confront and solve, especially during the transformation period. However, historical nihilists overlook the achievements of reform and opening-up. They focus on enlarging and criticizing individual issues without distinguishing them, even erroneously attributing these challenges to the socialist system itself and proposing an extreme "socialist failure theory." They also ignore the inherent defects of the capitalist system and praise it unilaterally. The prevalence of historical nihilism undoubtedly presents a major challenge for university students in establishing correct historical viewpoints and solidifying their socialist beliefs.

1.4 Questioning the Advancement of the Culture of Socialism with Chinese Characteristics

Chinese civilization, with its profound historical foundation and unique cultural charm, not only encapsulates the wisdom of the nation but has also inscribed a brilliant chapter in the history of world civilization. Its unparalleled cultural allure, dissemination power, and far-reaching influence have left an indelible mark globally. However, historical nihilist overlooks this, disregarding the indelible mark Chinese culture has left on the world stage, neglecting the role of this cultural system in consolidating national common emotions and values, and even dismissing the contributions made by the Chinese nation to world civilization. This ideology seeks to erode the cultural system and undermine national cultural confidence. Beginning from a "cynical" stance, historical nihilist attempts to deconstruct the historical process of the Chinese nation and its heroes. [4] It uses unscrupulous methods to distort the stories of figures like Qu Yuan, Yue Fei, and Liu Hulan, whose identities have become targets of ridicule. The intention is to destroy the national spirit—formed by long-term historical development and centered around patriotism—thereby negating the outstanding traditional culture, revolutionary culture, and advanced socialist culture of China. Ultimately, this erodes the cultural self-confidence of university students.

2. The Impact of Historical Nihilism on the "Four-sphere Confidence" of University Students

The trend of historical nihilism, accompanied by "information fragments", has invaded the ideological defenses of university students. It often disguises in terms of "rational thinking" and "reevaluation", sets theoretical traps and distorts history to capture attention. It aims to mislead university students, inducing them to fall into the abyss of nihilism, undermining their confidence in the path, doubting their confidence in theory, challenging their confidence in the system, and dissolving their confidence in culture.[2]

2.1 Undermining Confidence in the Path

The issue of what path we take is of vital importance for the survival of the Party, the future of China, the destiny of the Chinese nation, and the wellbeing of the people. Confidence in the socialist path is confidence in both the direction of socialism with Chinese characteristics and its future. Staying true to confidence in the path means steadfastly following the path of socialism with Chinese characteristics. This is an essential path to achieve socialist modernization, an objective truth proven by modern history, the fundamental guarantee for the Party to lead the people from one victory to another, and also the fundamental guarantee for the Chinese nation to become prosperous and stronger and ensure a better life for Chinese people. Confidence in the path is crucial to the success or failure of the Party's and the country's endeavors. The spread of historical nihilism influences university students' historical understanding and national identity, undermining the foundations of their confidence in the chosen path. Firstly, historical nihilism often denies or distorts historical events, seeking to erode people's sense of historical identity. If students are influenced by this ideology, they may develop doubts about historical truths, weakening their pride and attachment to national history and culture, which in turn affects their ability to establish solid confidence in the path. Secondly, historical nihilism skews students' understanding of the country's realities. It often attempts to erase or distort national historical events, leading to a skewed understanding of the nation among students. This can generate negative emotions and confusion, ultimately affecting their choice of future paths and their confidence, undermining the foundation of their confidence in the path. Lastly, by attempting to obliterate national historical glory and cultural traditions, historical nihilism may cause students to weaken their national identity and awareness. This diminishes their sense of responsibility and mission toward the nation and society, ultimately affecting their ability to shape and maintain confidence in the path.

2.2 Doubting Theoretical Confidence

Theoretical confidence is a profound belief and conscious adherence to the truthfulness, scientific nature, and practicality of Marxism and its sinicized theoretical achievements. [5] It reflects confidence in the scientific nature of Marxist theory, particularly the theoretical system of socialism with Chinese characteristics. Staying true to the confidence in theory means having firm confidence in understanding the laws of Communist Party governance, the laws of socialist construction, and the laws of human social development. It also means having unwavering confidence in achieving the great rejuvenation of the Chinese nation and creating a better life for the people. Historical

nihilism stands in opposition to the scientific truth of Marxism, and its overflow inevitably fosters a psychology of theoretical insecurity among university students. Firstly, it causes university students to develop cognitive biases about Marxist theory. Critics of historical nihilism sharply criticize Marxism, claiming it lacks scientific and systematic coherence and arguing that its concepts are outdated. They even denigrate Marxism as the greatest nihilist ideology in history. These viewpoints have led students to misunderstand the theory, posing challenges to ideological shaping. Secondly, they deny the scientific and rational nature of Marxist theory in contemporary society. By annihilating Soviet history, historical nihilists blame the collapse of the Soviet Union on errors in Marxist theoretical guidance, thus questioning the scientific basis and applicability of Marxism in contemporary social development.

2.3 Challenging Institutional Confidence

The driving force behind institutional confidence stems from the "practice, theory, and efficacy". From the perspective of practical motivation, it is a system that aligns with China's national conditions, is effective and practical, and is insincerely supported by the people. From the perspective of theoretical motivation, it is a theoretical system guided by Marxism. From the perspective of efficacy motivation, it is a system mechanism that can be transformed into governance efficacy.[6] Institutional confidence is the powerful assurance for realizing the Chinese Dream of the great rejuvenation of the Chinese nation. By denying the New Democratic Revolution, criticizing socialist transformation, and distorting the socialist nature of Reform and Opening-up, historical nihilism not only denies the historical legitimacy of the socialist system with Chinese characteristics but also subverts its socialist essence, damaging university students' confidence and support for the national system. Influenced by historical nihilism, many students find it challenging to use the laws of historical development and contemporary contexts to profoundly grasp the essence of history, struggling with rational analysis. When faced with the seduction of historical nihilism, they tend to waver in their established political and historical views, losing the ability to discern the authenticity of history and fail to distinguish primary from secondary in historical events and contradictions. This phenomenon poses a severe challenge to rational cognition.

2.4 Dissolving Cultural Confidence

Culture is a country and nation's soul. A country will thrive only if its culture thrives, and a nation will be strong only if its culture is strong. Cultural confidence is the full affirmation and active practice of a nation, a country, and a political party in the value of its own culture, as well as a firm belief in the vitality of its culture. Strengthening cultural confidence is a critical issue concerning national prosperity, cultural security, and the independence of national spirit.[7] The overflow of historical nihilism inevitably leads university students to erode their cultural confidence. Firstly, it causes the Chinese nation to lose the spiritual motivation for survival and development. With its deep historical accumulation and rich cultural connotations, Chinese civilization holds a unique and brilliant chapter in the history of human civilization. The excellent traditional culture of the Chinese nation, having been passed down for thousands of years, not only builds a complete cultural system but also has its spiritual core and values recognized globally as a crystallization of

human wisdom. Historical nihilism belittles Chinese excellent traditional culture, stigmatizes modern revolutionary history and national heroes, and glorifies negative figures in history, potentially causing university students to develop a sense of cultural inferiority, thereby losing collective consciousness and national awareness, making it difficult to gather strength to overcome adversity. Secondly, it affects the sense of identity with the path, theory, and system of socialism with Chinese characteristics. Cultural confidence is more fundamental, widespread, and profound, embodying the root of confidence in the path, theory, and institution of socialism with Chinese characteristics.[8] Historical nihilism weakens university students' cultural confidence, affecting their support for the path, theory, and system of socialism with Chinese characteristics. Lastly, it affects the process of building a modern and powerful socialist country. Historical nihilism makes university students lack pride in Chinese excellent traditional culture, confidence in revolutionary culture, and recognition of advanced socialist culture, making it difficult for them to shoulder the cultural mission of building a culturally powerful nation, thus affecting the process of building a socialist cultural power in China.

3. Countermeasures to Get Rid of the Impact of Historical Nihilism on the "Four-sphere Confidence" of University Students

To curb the spread of historical nihilism and diminish its negative impact on university students, it is urgent to form a comprehensive and multi-dimensional synergy to get rid of historical nihilism, guiding students to firmly strengthen the "Four-sphere Confidence." [2]

3.1 Building a Network Position to Counter Historical Nihilism

In today's information and network age, the Internet has become a vital platform for the clash of various ideologies and viewpoints. With the help of the Internet and new media, historical nihilist remarks continue to proliferate in cyberspace.[9] Therefore, it is particularly important and urgent to build an effective network position to counter historical nihilism. Firstly, we should strengthen the online communication capacity of official media. Official media should leverage their authority and credibility, using platforms such as Weibo, WeChat, and news websites to promptly release accurate and comprehensive historical information, guiding online public opinion. Secondly, we should establish professional historical research websites and databases, providing authoritative and accurate historical materials for the public to help students correctly understand history. Moreover, in constructing network position, we should focus on diversified promotional methods. Historical-themed films, documentaries, and animations can vividly present historical facts, enhancing the attractiveness and persuasiveness of mainstream ideological content. Additionally, live broadcasting and short videos can be employed to attract more university students' attention and participation. Lastly, we should encourage university students to participate in online discussions. By organizing online forums and discussion groups, students can be encouraged to participate in historical discussions, forming a correct view of history.

3.2 Strengthening Theoretical Research and Promotion of the Histories of the Party, New China, the Reform and Opening-up, and the development of socialism

The study and education of the "Four Histories of China" is a crucial channel for enhancing the historical education for party members, cadres, and the public. Through learning about the history of the Party, the history of New China, the history of reform and opening-up, and the history of socialist development, people can gain a more comprehensive understanding of the developmental progress of the party and the nation's endeavors, profoundly recognize the correctness of the socialist path with Chinese characteristics, and firmly continue along the Long March in the new era. Furthermore, studying the "Four Histories of China" is an essential weapon against the invasion of historical nihilism. Only by deepening the understanding of history can one better recognize the essence and hazards of historical nihilism and consciously resist its erosion. Strengthening theoretical research and the promotion of the "Four Histories of China" is key to resisting the invasion of historical nihilism. Firstly, it is necessary to enhance theoretical research, deeply exploring the rich connotations and contemporary value of the "Four Histories of China" to provide solid theoretical support for promotion and education. Secondly, we should innovate promotion and education methods, utilizing modern communication media like the Internet and new media to make learning about the "Four Histories of China" more lively, vivid, and engaging. Additionally, we should also focus on integrating "Four Histories of China" education with practical work, encouraging students to convert learning outcomes into powerful motivations for working.

3.3 Strengthening the Construction of Ideological Work Mechanisms in Universities

Ideological is crucial for establishing the foundation of the nation and the soul of the people. Therefore, constructing a long-term mechanism for ideological work is a necessary guarantee for universities to effectively resist erroneous ideologies like historical nihilism.[10] Firstly, it is essential to construct and improve a working mechanism where the Party committee takes overall responsibility, the publicity department takes the lead, and relevant departments collaborate, forming a "vertical and horizontal cooperation, taking a multi-pronged approach to guide students' ideological and political education. Furthermore, we should establish and improve monitoring and early warning mechanisms for ideological work to promptly identify and address emerging and tendentious issues, ensuring campus ideological security. Moreover, we should strengthen the leading role of ideological and political theory courses. Universities should fully leverage the leading role of these courses to guide students in establishing correct views on history, the nation, and the ethnicity, firmly strengthening the "Four-sphere Confidence" in their minds. Lastly, we should standardize course settings and teaching content in universities, focusing on the ideological nature of course settings and the scientific nature of the teaching content, to ensure that the knowledge imparted to students has a correct view of history and values. By interpreting history from a multiple perspectives and levels, students are inspired to perceive the depth of history with historical thinking, cultivating solid historical understanding and cultural confidence to guard against the impact of historical nihilism.

3.4 Creating a Campus Cultural and Ideological hub Led by Socialist Core Values

To safeguard the cultural domain, it is imperative to establish a campus cultural and ideological hub led by socialist core values to resist the invasion of historical nihilism. The campus is a crucial place for shaping students' thoughts and values, while campus culture represents the long-lasting and shared value pursuit developed during the long-term running of the university.[11] Facing the challenge of historical nihilism, we must adhere to the socialist direction of campus culture, integrating socialist core values into every aspect of education. Through classroom education, campus cultural activities, and social practice, various forms can be used to create an uplifting, inclusive, and harmonious campus environment for students, allowing them to deeply understand the remarkable deeds of national heroes, experience the noble spirit of revolutionary martyrs, and learn from the excellent qualities of exemplary figures. This encourages students to deeply comprehend and identify with socialist core values, thereby forming correct views on history, nation, and state. Additionally, specific historical commemorations can be leveraged to carefully plan red culture promotion activities. Organizing speech contests, hero story quizzes, watching revolutionary-themed movies, and appreciation of dramas can ignite students' patriotism and passion for the party, deepening their understanding and insight into historical events, fulfilling cultural missions, resolutely following the socialist path, and build a solid foundation for Marxist beliefs and communist ideals. Furthermore, universities should emphasize ideological leadership and cultural inheritance, continuously enhancing youth pride, confidence, and identification with the Chinese excellent traditional culture, revolutionary culture, and advanced socialist culture, augmenting their discernment of foreign cultures, and their resistance to decadent, backward cultures, thus solidifying cultural confidence. At the same time, universities should pay attention to the development of the times, integrating socialist core values with contemporary advancements, guiding students to focus on national development and national rejuvenation, enhancing their sense of responsibility and mission.

Conclusion

The historical nihilism has a severe threat to the mainstream social ideology in many aspects. It poses varying harm to the construction, development, and recognition of the path, system, theory, and culture of socialism with Chinese characteristics under the leadership of the Communist Party of China. History must not be tarnished or arbitrarily altered. In the context of the development of diverse social ideologies, and facing to the impact of historical nihilism, university students of the new era should be more determined to follow the path of socialism with Chinese characteristics, learn the excellent, correct, and scientific socialist theories, have faith in the socialist system led by the Party and the state, promote and inherit the culture of socialism with Chinese characteristics, uphold the "Four-sphere Confidence" and strive to be Chinese youth of the new era.

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Conflict of Interest

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An Analysis of the Overseas Dissemination Phenomenon and Strategy of Chinese Internet Literature

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Abstract

Recently, Chinese online literature works have been included in the Chinese collection catalog of the British Library, one of the world's largest academic libraries. A total of 16 online literature works are included, such as *The Road to Revival*, *Heavy Industry of a Great Nation*, *The Son-in-Law*, *The Great Doctor Ling Ran*, *Painting the Spring Light*, and others. This reflects the growing international influence of Chinese online literature. More and more foreign readers are becoming fans of Chinese web novels, with their enthusiasm rivaling that of domestic fans. Some even go so far as to pay high prices for translations in order to better read and appreciate these works. Some readers even refer to Chinese online literature alongside Hollywood films, Korean TV dramas, and Japanese anime as the "four global cultural wonders." This phenomenon clearly demonstrates the potential and appeal of Chinese online literature in overseas markets. This paper analyzes the current status of Chinese online literature, explores the reasons for its "outreach," and, based on this, offers suggestions for the international dissemination of other Chinese cultures.



Full Text Article



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Keywords: Online Literature; Overseas Dissemination; Web Novels Going Global

Introduction

With the world becoming increasingly globalized, cultural exchanges between countries are growing closer. With the advancement of economic and technological progress, countries around the world are paying more attention to the inheritance and protection of their traditional cultures. Recently, the spread of Chinese online literature overseas has garnered widespread attention. Within just a few years, it has attracted nearly ten million readers, gained countless fans, and become one of the most popular forms of online literature today, thus becoming a key channel for cross-cultural communication. Some even refer to Chinese web literature alongside Hollywood films, Korean dramas, and Japanese anime as the "four global cultural wonders." Many writers and online creators are also promoting their literary works overseas, leading to significant economic and social benefits.

This is not merely the presentation of literary creations, but also reflects the transmission and interaction of culture. Studying the methods of overseas dissemination of Chinese online literature is of great significance. By deeply studying and analyzing the spread of Chinese online literature abroad, we can better understand the driving forces behind it, its impacts, and the strategies of cultural dissemination, providing valuable references for the global spread of Chinese culture. Therefore, this paper will deeply analyze the phenomenon of Chinese online literature spreading overseas, explore its underlying reasons, challenges, and issues, and propose effective methods to promote the international dissemination of other Chinese cultures. Based on these research findings, we hope to better spread Chinese culture and foster interaction and learning between Chinese and foreign cultures.

Current Status of Chinese Online Literature's Overseas Dissemination

Today, Chinese online literature has become a global cultural phenomenon, attracting readers from around the world. With the arrival of the digital age, more and more countries are focusing on the inheritance and protection of their traditional cultures. Within internet culture, there are many excellent literary works worthy of our attention and appreciation. The following is an analysis of the history of Chinese online literature's overseas dissemination and a summary of its key characteristics in the global context.

1. The History of Chinese Online Literature's Overseas Dissemination

The history of Chinese online literature's overseas dissemination dates back to 2001 when the predecessor of Qidian Chinese Network, the China Fantasy Literature Association (CMFU), began spreading novels to overseas Chinese communities. Overall, the overseas dissemination of Chinese online literature has gone through three major phases:

The First Stage: During this phase, the overseas dissemination of Chinese online literature was mainly focused on digital copyrights and the publication of physical books. The dissemination was largely confined to Chinese-speaking regions, where excellent online novels were translated into other languages to introduce Chinese web literature to a wider audience.

The Second Stage: In this stage, Chinese online literature began to establish overseas portals and scale up the translation and output of web novels. The reach of dissemination expanded further, covering a broader overseas reader base. Major online literature platforms launched overseas portals, offering more diverse reading experiences to meet the demands of readers from different countries and regions. At the same time, the number and quality of translation teams were improved, accelerating the globalization of Chinese online literature.

The Third Stage: In the final stage, the focus shifted towards protecting the originality of Chinese web literature. Interaction and collaboration with overseas writers gained more attention, encouraging the creation of works with a global perspective and multicultural characteristics. This model not only brought Chinese online literature's original works to the international stage but also successfully attracted more overseas writers to participate in Chinese online literature creation.

Overall, the overseas dissemination of Chinese online literature has evolved from initial efforts aimed at overseas Chinese communities, to large-scale translation and global promotion, and finally to an emphasis on fostering original creations. As Zhang Fuli mentions in *From Works Going Global to Ecosystem Going Global: The International Dissemination of Chinese Online Literature*, "After over 20 years of development, Chinese online literature has exported over 10,000 works, reaching nearly 145 million overseas readers, with the overseas market size surpassing 3 billion yuan. From 2004, when online literature began to sell copyrights to overseas publishing institutions and translate into other languages, to the explosive growth of major translation platforms after 2012, and the recent maturity of the online literature overseas dissemination industry chain, Chinese web literature has undergone changes from translation and reading to imitation, realizing the full IP dissemination of online novels." This history has not only introduced Chinese online literature to a broader audience but also built a wider and deeper bridge for cultural exchange between China and the rest of the world.

2.Characteristics of the Overseas Dissemination of Chinese Online Literature

The current overseas dissemination of Chinese online literature presents the following characteristics:

2.1 Continuous Expansion of Overseas Market Scale

As the overseas dissemination of Chinese online literature strengthens, the size of the overseas market continues to grow. According to the 2022 China Online Literature Blue Book released by China Writers Network in April 2023, online literature has become a prominent cultural ambassador for China's global outreach. The overseas market scale of Chinese online literature has steadily expanded, with 150 million overseas users and more than 16,000 works of web literature exported. Revenue has grown from less than 100 million yuan to over 3 billion yuan. Subscription and reading app users exceed 100 million, covering most countries and regions worldwide.

2.2 Increasingly Diverse Overseas Reader Base

The overseas readership of Chinese online literature is becoming more diverse, encompassing readers of different genders, ages, professions, and cultural backgrounds. According to relevant data, Southeast Asia is the primary overseas market for Chinese online literature, though markets in Europe and America are also gradually expanding. Wang Lin, in *Research on the "Going Global" of Chinese Web Literature under the "Belt and Road" Initiative*, mentions, "According to an iResearch report, Chinese online literature already has nearly 10 million readers abroad, with over 150 million in Southeast Asia, over 300 million in Europe, and over 400 million in the Americas, with even more potential fans waiting to be tapped." This indicates a strong demand for Chinese web literature in the overseas market and suggests significant room for further growth.

2.3 Continuous Improvement in Translation Quality and Quantity

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To better meet the reading needs of overseas audiences, the quality and quantity of translations of Chinese online literature have been consistently improving. Major online literature platforms are actively promoting translation efforts, collaborating with overseas publishers and translation teams to ensure that the translated works are accurate and authentic. At the same time, many translation websites dedicated to Chinese online novels have emerged abroad. These websites even offer explanations of specialized Chinese web novel terminology, accurately translating terms ranging from colloquial phrases like "single dog" and "working class" to more complex concepts like "Taoist philosophy" and "Buddhist terminology."

Opportunities and Challenges in the Overseas Dissemination of Chinese Online Literature

With the continuous development of globalization and information technology, the overseas dissemination of Chinese online literature has gained a broader platform and more diversified channels. Moreover, the phenomenon of Chinese online literature "going global" has garnered support and attention from both the government and various sectors of society, providing more resources and momentum for its overseas promotion. Most importantly, online literature has become a crucial carrier for the export of Chinese culture. Chinese elements and culture, such as Chinese kung fu, literature, calligraphy, cuisine, and traditional medicine, have become some of the most popular themes. Works such as *The Daoist Library*, which reflects traditional Chinese values, *The Shaman's Chronicle*, based on Eastern mythologies, and *The Gourmet in Another World*, which promotes Chinese culinary culture, have all received positive feedback abroad. Over time, 15 major categories and more than 100 subcategories of original overseas online literature have emerged, with Eastern fantasy themes, which promote Chinese traditional culture, being particularly popular among international creators.

Overall, while the overseas dissemination of Chinese online literature is showing positive development, there are still several challenges and issues to address.

1. Cultural Differences and Translation Barriers

Due to significant differences in cultural backgrounds and language expression, readers may have limited understanding and acceptance of Chinese online literature. Currently, the export of Chinese online literature mainly relies on translation. From a user's perspective, the quality of translations directly affects the reading experience. Especially since Chinese online literature tends to be lengthy and contains a lot of culturally unique terms, translators must not only have a high level of linguistic skill but also a deep understanding of Chinese culture and context. For example, the protagonist of *The King's Avatar*, Ye Xiu, uses the game name "Jun Mo Xiao" (君莫笑), which reflects a bold, melancholic, and fearless emotion. However, in the translation, the name is split into "Jun" (君) and "Mo Xiao" (莫笑), translated as "Lord Grim." This translation creates the impression that the character is a serious and proud person, leading to a misunderstanding of the protagonist's character.

Improving translation quality is key to the overseas dissemination of Chinese online literature. To this end, it is essential to invest in the training of professional translators and enhance their skills. Additionally, translation companies should raise the entrance requirements for translators and certify their qualifications. We can also collaborate with overseas translation institutions to cultivate translators who understand both Chinese and local cultures, thus improving translation quality and bridging language and cultural gaps. With the advancements in information technology, AI translation can also be used to assist with the process, followed by human revision to improve efficiency.

2. Copyright Protection and Piracy Issues

As Chinese online literature spreads widely overseas, copyright protection and piracy have become increasingly prominent issues. From an international perspective, given the cross-border nature of the creation and dissemination of online literature, copyright protection faces greater challenges. In particular, some individuals illegally translate and distribute works without authorization, infringing upon authors' rights and interests and disrupting the order of online literature dissemination abroad.

Therefore, establishing international copyright protection measures and cracking down on piracy and infringement have become urgent issues. On one hand, governments need to implement stricter laws and regulations to create a robust copyright registration and protection system, intensify efforts to combat infringement and piracy, and safeguard the rights of original authors. Additionally, there should be stricter regulation of online platforms to monitor and promptly remove pirated works. Collaboration with overseas institutions to combat cross-border piracy and infringement, with dual supervision from both domestic and international bodies, is essential to create a healthy and orderly online literature platform. On the other hand, authors' awareness of copyright protection should be strengthened to ensure that their rights are effectively safeguarded. Only with the concerted efforts of both the state and the authors can infringement be effectively curbed, fostering the healthy and orderly development of China's cultural industry.

3. Superficial Dissemination of Chinese Traditional Culture

Li Chen, in his analysis in *Research on Chinese Online Literature's "Going Global" from the Audience Perspective*, points out that while Chinese online literature with historical themes, rich in Chinese elements, plays a role in disseminating Chinese culture abroad, it largely caters to foreign readers' curiosity about Chinese culture. At its core, it tends to use Chinese stories to convey Western values without fully transmitting the spiritual essence of Chinese traditional culture. For instance, novels such as *Panlong*, *The Immortal World*, and *Battle Through the Heavens* often revolve around "an ordinary person achieving their aspirations through hard work" and emphasize the protagonist's individual power, which aligns with the Western value of "individual heroism." This resonates with Western readers, but the deeper cultural essence of China is not effectively conveyed.

While Chinese online literature has become a popular vehicle for cultural dissemination abroad, it still often only scratches the surface of transmitting Chinese cultural values, without delving deeply into the spiritual connotations of traditional Chinese culture.

Reasons for the "Outreach" of Chinese Online Literature

1. Government Support

China has long emphasized the importance of international discourse and encourages various sectors to tell Chinese stories in a way that is easy to understand. The 20th National Congress of the Communist Party of China emphasized, “Enhance the global influence of Chinese civilization. Uphold the cultural stance of China, highlight the spiritual identity and cultural essence of Chinese civilization, and speed up the construction of Chinese discourse and narrative systems to tell China’s stories well, spread China’s voices, and present a trustworthy, lovable, and respectable image of China.” The popularity of Chinese online literature abroad and its potential for spreading “Chinese stories” make it an important medium for promoting China's cultural outreach.

To support this, the government has provided strong backing for the creation and publication of online literature. The establishment of various literary creation and publishing funds has encouraged authors to engage in creation and publication. Moreover, the government has introduced policies emphasizing that online literature should shoulder the responsibility of inheriting and promoting excellent traditional Chinese culture. The focus on improving the quality and societal impact of works has significantly enhanced the quality and healthy development of Chinese online literature.

2. Rich Content and Innovative Approaches

Chinese online literature covers a wide range of genres, including palace drama, fantasy, romance, and more, offering readers a rich selection. Additionally, it continually innovates by integrating traditional cultural values with contemporary elements, attracting a large number of young readers both domestically and abroad. The advancement of internet technology has also facilitated the widespread dissemination of Chinese online literature. The channels for its distribution have expanded from physical books to online translation websites, social media platforms, apps, and mini-programs, making access to Chinese online literature easier and more widespread, which creates more opportunities for international exposure.

3. Technological Support and Translation Promotion

With the continuous improvement of internet technology, the dissemination of Chinese online literature has become increasingly convenient. Online reading platforms and social media enable works to be rapidly spread worldwide, giving more people the chance to encounter Chinese culture. Digital media, which is rising rapidly, also plays a significant role in facilitating the overseas dissemination of Chinese online literature. It combines traditional print media with emerging online media, creating a new digital media form with broad reach and rapid transmission. Additionally, the successful "outreach" of Chinese online literature owes much to the efforts of translators. Translators with bilingual or multilingual backgrounds have played a key role in

bridging the cultural gap between China and other countries by making Chinese online literature accessible to international readers.

Lessons from the Successful Overseas Dissemination of Chinese Online Literature for Cultural Promotion

1. Government Support at the National Level

The overseas dissemination of Chinese culture cannot succeed without government support. The government should play a central role in policy guidance, market regulation, and public service. For example, the government should establish funds dedicated to cultural exchange, translation, publishing, and media dissemination, and encourage enterprises and individuals to actively participate in cultural exchange activities. Additionally, efforts should be made to enhance China's image and soft power, boosting cultural confidence. By strengthening cross-cultural communication, China can more effectively promote its culture on the international stage.

2. Importance of Cultural Translation

The success of Chinese online literature's "going global" highlights the crucial role of high-quality translation in cultural outreach. When promoting Chinese culture, it is important to ensure that translations are accurate and culturally authentic, overcoming language and cultural barriers so that international readers can truly understand and appreciate Chinese culture. Professional translation teams should be cultivated, and translators should have expertise in both Chinese culture and foreign languages. This will enhance the overall quality of translations and the effectiveness of cultural dissemination.

3. The Role of Digital Media

The success of Chinese online literature's overseas dissemination is inseparable from the support of digital media. With its fast dissemination and broad coverage, digital media enables Chinese culture to reach the world rapidly. Traditional and new media forms should be integrated to create innovative ways to present Chinese culture, such as through films, television shows, documentaries, and social media platforms.

4. Other Dissemination Strategies

Tourism and international events, such as the Olympics and World Expos, also serve as platforms for showcasing Chinese culture globally. For example, the 2022 Winter Olympics opening ceremony highlighted China's traditional culture, such as the 24 solar terms countdown, which showcased the wisdom and charm of Chinese classical culture. Through such global platforms, China's culture can be better understood and appreciated worldwide.

Conclusion

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Liu, B. (2024). An Analysis of the Overseas Dissemination Phenomenon and Strategy of Chinese Internet Literature. *Journal of Modern Social Sciences*, 1(2), 345–352.

The overseas dissemination of Chinese online literature is not merely the export of literary works; it is also a form of cultural exchange, allowing readers around the world to appreciate the profound richness of Chinese culture. This paper analyzes the phenomenon of Chinese online literature's global expansion and finds that its success is driven not only by government support and technological advancements but also by the active innovation of its people in spreading these works. The "outreach" of Chinese online literature provides valuable insights and experiences for the international spread of other Chinese cultural elements. The global dissemination of Chinese culture requires not only government support in terms of policy, funding, and talent but also the continuous innovation of dissemination methods through the use of internet technology. This can improve the translation quality of literary works, which serve as carriers of culture. Additionally, leveraging industries such as tourism and international events can further promote the overseas spread of Chinese culture. Through this research, we aim to better showcase the appeal of Chinese online literature and, as a cultural vehicle, more effectively spread Chinese culture, fostering cultural exchange and mutual learning between China and other countries, thereby enhancing China's cultural soft power.

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Enhance fire safety and emergency evacuation protocols: Addressing equipment modernization, public space evacuation challenges and the needs of persons with disabilities

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Abstract

This study investigates issues such as the modernization of fire equipment, evacuation difficulties in large public venues, and the inadequacies of current evacuation systems for people with disabilities. The subjects include newly built and aging communities, large public venues, and individuals with disabilities. Research methods include literature review, surveys, field observations, and expert interviews. The study covers fire equipment updates, evacuation drills in special venues, and the mobility and needs of disabled individuals in emergencies. Findings show that fire equipment updates in new communities are progressing smoothly, while renovations in older neighborhoods face challenges. Evacuation drills in large venues encounter multiple obstacles, and current evacuation systems fail to meet the needs of disabled individuals. Recommendations include improving fire equipment in older communities, implementing practical evacuation drills in special venues, and collecting data on disabled individuals to create personalized evacuation plans, thereby enhancing overall emergency management.

This study provides valuable guidance for the industry, advocating for optimized management practices, effective fire equipment, and enhanced public awareness of fire safety and self-rescue. It aims to prevent and reduce fire accidents, contribute to the theoretical and practical development of emergency management, and support the standardization and regulation of public safety, ultimately fostering a safer, more stable, and sustainable social environment.

Keywords: emergencies; urban management; emergency response; social security

Introduction



Full Text Article



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1.1 Background of the study

In recent years, rapid urbanization and increasing population density have led to frequent fire incidents, presenting significant challenges to urban public safety and emergency management. In China, the aging population and expansion of large public venues have made effective fire emergency response crucial. According to statistics, the number of fire alarms surged in the first half of 2023, particularly from electrical faults in self-built residential fires, resulting in significant casualties and property damage^[1]. These incidents highlight deficiencies in the current fire equipment and evacuation systems, especially for vulnerable groups such as individuals with disabilities and the elderly.

In this context, optimizing fire emergency management is key to improving public safety. Properly functioning fire equipment not only enables timely rescue and reduces casualties, but also enhances public confidence in safety, fostering a more secure environment^[2]. By improving management practices, equipment efficiency, and training, public awareness of fire safety and self-rescue can be strengthened, ultimately minimizing fire-related risks.

This study addresses three critical issues: 1) the modernization of fire equipment, 2) challenges in evacuation drills for large public venues, and 3) the failure of current evacuation systems to meet the needs of vulnerable groups. Through surveys of new communities, aging neighborhoods, large venues, and individuals with disabilities, this research identifies the gaps in China's fire emergency system and offers recommendations for improving evacuation drills, upgrading equipment, and creating specialized evacuation plans. It also fills a research gap by collecting extensive data through field observations and expert interviews on evacuation needs for disabled individuals.

The findings provide data to support improvements in China's fire emergency management, offering insights for more effective evacuation planning. This research also contributes to the theoretical development and practical application of emergency management, promoting the standardization of public safety and helping to build a safer, more stable, and sustainable society.

1.2 Literature Research

1.2.1 Fire protection retrofit

Fire protection retrofitting of old buildings faces many challenges and problems. The current fire code mainly applies to new buildings^[3], there is no customized fire guidelines for old buildings^[4], resulting in the original design does not comply with the current code requirements, there are insufficient fire separation, fire facilities and equipment aging serious, low fire resistance rating of the building structure, and the existing evacuation system does not comply with the standards and other issues. Most of the structures and facilities of old buildings have aged, making fire safety hazards increasingly prominent, and once a fire occurs, it is difficult to quickly extinguish the initial fire, resulting in serious losses. For example, the renovation of the fire water system is one of the typical fire protection renovation, engineer Zheng Xiang^[5] in the renovation of the Fuzhou People's Hall, the old water system to make a more complete exposition. It is urgent to solve the fire safety problems of old buildings, and it is necessary to formulate stricter fire codes, strengthen the upgrading of fire protection facilities and equipment, improve the fire resistance of building

structures, and improve the evacuation system, so as to ensure the safety of residents' lives and properties.

1.2.2 Review of relevant domestic and international studies

With the acceleration of urbanization and the frequent occurrence of natural disasters, emergency management, evacuation, and escape have become key areas of societal focus^[6]. Emergency management aims to reduce losses and protect life and property through effective organization, command, and coordination. However, with the increasing frequency of natural disasters and rising social security risks, emergency management faces more complex challenges. To address these challenges, researchers have proposed various strategies, such as developing contingency plans, conducting drills, and building infrastructure.

In international research, evacuation and escape behavior^{[7][8]} have become important topics in the field of emergency management. Many factors influence evacuation behavior, including demographic characteristics and risk perception. However, existing studies have limitations, such as a lack of forward-looking design and insufficient exploration of psychological factors. Future research should enhance forward-looking design, delve deeper into the impact of psychological factors on evacuation behavior, and strengthen international comparative studies.

In summary, emergency management, evacuation, and escape are crucial fields related to societal stability and development. Ongoing research and practice will provide more scientific and effective strategies for responding to emergencies and ensuring the safety of life and property.

1.3 Innovative points of this study

1.3.1 Research innovations in program design

Traditional fire research focuses on unidimensional analysis. This study adopts a multidimensional evaluation approach, combining the experience of professionals and general staff to customize evaluation metrics for different industries and venues. It introduces big data and artificial intelligence technologies to enhance the accuracy and efficiency of assessments and optimizes the plan by incorporating the latest fire safety standards. The design emphasizes operability and long-term benefits, ensuring implementation and promotion. These innovations enhance the scientific rigor and practicality of the study.

1.3.2 Research Innovations in Data Acquisition

Traditional methods such as surveys and in-depth interviews are combined with modern technologies like text mining and social media analysis to collect more accurate fire-related data. Advanced statistical methods and big data analytics are used to ensure the authenticity and validity of the data, providing strong support for the development of fire safety systems.

1.3.3 Innovations in analytical methods

This study integrates both qualitative and quantitative analysis to explore fire safety awareness. Qualitative analysis is based on field research and interviews, while quantitative analysis uses various statistical techniques to identify the influencing factors of fire safety awareness, providing a scientific basis for improving fire education and training. These methods enhance the accuracy and reliability of the research.

Data sources and sample situation

2.1 Survey units and targets

2.1.1 Investigation unit

The survey focuses on emergency evacuation management for fire safety and is conducted in a variety of locations such as nursing homes, hospitals, factories, office buildings, stadiums, and convention centers. These diverse venues were chosen because they involve many people in their daily operations and have certain safety hazards and special evacuation difficulties. By investigating these diverse locations, we can gain a comprehensive understanding of the current status of fire safety and emergency evacuation management in each area, and identify problems and improvements.

2.1.2 Target audience

The survey respondents were subdivided for different venue types:

(1) Nursing homes and hospitals: Focus on the head of the security department, permanent residents, staff, inpatients and transients. These groups require special attention and protection during emergency evacuations.

(2) Factories and office buildings: the main investigation is of the head of DSS, workers and employees. These places are densely populated and evacuation in case of emergency is crucial.

(3) Stadiums and convention centers: Focus on the head of the Department of Safety and Security, randomly moving personnel and exhibition staff. These venues often host large-scale events, with frequent movements of people, making emergency evacuation management more challenging.

2.2 Designing the questionnaire

This project is divided into two parts: a pre-survey and a formal survey.

2.2.1 Pre-survey

The preliminary investigation for this project consisted of two main parts:

First, a preliminary questionnaire was designed with 20 questions. The team reviewed relevant literature to understand the theoretical background and developed the initial questionnaire. During the distribution and collection, the team evaluated the logical consistency of the questions, addressing issues like unclear wording and insufficient options. These revisions improved the reliability and accuracy of the final survey.

Second, field visits were conducted to better understand real-world challenges. The team visited several large public venues, where they discussed issues encountered in the formal survey with experts, ensuring the study's conclusions were more representative.

Key aspects of the investigation:

Survey Design: A 20-question preliminary survey was developed and refined based on feedback to enhance its clarity and reliability.

Field Investigation: The team conducted site visits to key locations, gathering insights on emergency management practices and challenges for further survey design.

2.2.2 Formal survey

The formal survey was divided into two parts:

First, expert interviews were conducted. The team identified key emergency issues in public places and gathered relevant terms from online sources. In-depth interviews were held with the primary persons in charge to discuss the real problems.

(1) Shanghai Municipal Fire Bureau Chief: He acknowledged current fire safety measures but highlighted areas needing improvement, such as the introduction of new technologies to enhance efficiency. He stressed the need for individualized firefighting facilities and emphasized the future application of intelligent firefighting systems, as well as the importance of public education and prevention.

(2) Fire Commissioner of Shanghai Children's Medical Center: The commissioner detailed the center's high standards in fire safety, from architectural design to advanced facilities. Regular fire drills are conducted to improve emergency response. The center also focuses on pediatric-specific evacuation plans, ensuring a high level of preparedness for both staff and patients.

(3) Director of Red Sun Nursing Home: The director described the nursing home's fire safety initiatives, including militarized management, strict ignition source control, and specialized staff training. The home's infrastructure is optimized for elderly residents, with clear fire escapes and regular fire drills. Special measures are taken to adapt evacuation routes and facilities to the elderly's mobility and cognitive needs.

(4) Head of Security at Shanghai Mental Health Center: The head outlined the hospital's fire safety measures, including regular patrols and corrective actions to maintain clear fire escapes. The hospital has experienced only one small-scale fire, which was promptly extinguished. The security staff are well-trained, and regular fire drills are conducted to improve emergency response. Improvements have been made to the alarm system to reduce false alarms.

Second, a formal questionnaire was designed and distributed. Based on feedback from the pre-survey and expert interviews, the questionnaire was refined to address new issues. The final version, titled "Survey on Social Cognition and Opinions on Emergency Management," was released via Questionnaire Star, with widespread publicity to ensure comprehensive data collection.

2.3 Quality control

In order to ensure that the research results are accurate and scientific, the survey team needs to strictly control the survey quality and evaluation. The survey will start from training, auditing, optimization and gap filling to ensure that the questionnaire is logical and coherent, the data is true and objective, and the analysis is accurate and effective.

2.3.1 Interviewer training phase

After the establishment of the research team, the investigators received strict training, learned the theoretical knowledge and practical methods of market research, laying the foundation for the actual combat. Subsequently, the investigators brainstormed to determine the direction, purpose and ideas of the research, which provided a good concept and clear planning for the launch of the research.

2.3.2 Research and implementation phase

When collecting literature data, members utilized websites and authorities such as Knowledge.com and Wanfang to screen out academic materials suitable for the research, which provided literature support for the survey. In the questionnaire design, the researchers discussed the details of the research in depth to determine the design direction, and the questions were designed by different members to ensure comprehensiveness and objectivity. Meanwhile, remarks were set to reduce ambiguity. For sensitive or private issues, hidden questions and indirect ways of obtaining information were used to improve the quality of recovery.

2.3.3 Data collation phase

After recovering the questionnaires, the data analysis members are responsible for examining and screening the questionnaire data, using SPSS and other analytical tools and models to conduct more accurate and scientific screening, and to regard multiple questionnaires with too much similarity, questionnaires whose answers do not conform to the logic of the questions as invalid questionnaires, and to exclude them to ensure the authenticity and accuracy of the data results. The following quality control was realized in this research: (1) checking the data sources to ensure that they are reliable and meet the quality standards; (2) ensuring that the data are complete without omissions or errors; and (3) recording and verifying the details of the data.

Questionnaire data analysis

3.1 Data cleansing

The main purpose of data cleaning is to address errors or unreasonable data and perform consistency checks to ensure that variable values fall within a reasonable range, and to identify any logical errors or outliers. Since the sample size is relatively large, if missing values are minimal and correlations between variables are low, we will retain the cases with missing values and only exclude them when necessary in the analysis. However, if a questionnaire has too many missing values, the case will be removed (for example, if there is only one healthcare or social security

worker in a particular group, and detailed analysis is not possible, it will be excluded in subsequent analysis such as one-way ANOVA).

After preliminary screening, we used Excel for data cleaning. For example, we assigned the value of 1 to male and 2 to female for gender, and grouped age and education levels into scalar data (e.g., 1/2/3/4, etc.). After completing data cleaning and entry, the cleaned data was imported into SPSS for further analysis.

3.2 Frequency analysis of demographic variables

In questionnaires, demographic variables (e.g., age, gender, education, occupation, etc.) are used to describe the basic characteristics of respondents and are essential for data analysis and interpretation of results. As part of the questionnaire, these variables help in further analysis, group comparisons, controlling for confounding factors, and ensuring that the findings are more comprehensive and accurate.

TABLE 1 Numerical characteristics of demographic variables

Frequency analysis of demographic variables					
variant	options	frequency	percentage	Means	standard deviation
distinguishig between the sexes	male	357	62.3%	1.38	0.49
	women	216	37.7%		
age	18-25 years	4	2.1%	3.03	0.8
	26-35 years	46	24.1%		
	36-50 years	82	42.9%		
	51 years and over	59	30.9%		
educational level	Junior high school and below	47	24.6%	2.83	1.48
	High school/secondary school	21	11%		
	university college	32	16.8%		
	university undergraduate course	67	35.1%		
	Graduate students and above	24	12.60%		
Type of work	ward care	30	15.7%	4.43	2.39
	Outpatient and emergency medical care	13	6.8%		
	medical post	8	4.2%		
	administration	26	13.6%		
	Property Services	61	31.9%		
	security post	2	1%		
	unit of construction contracted out	22	11.5%		
	building industry	19	9.9%		

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	service industry	9	4.7%		
	Health care/social security	1	0.5%		

Table 1 reveals the numerical characteristics of the demographic variables, demonstrating the distribution of respondents. The mean and standard deviation indicate concentration trends and fluctuations, respectively. The results of the frequency analysis show that the distribution of the variables basically meets the requirements of the sample survey. For example, in the gender distribution, male students accounted for 62.3% and female students accounted for 37.7%; in the age distribution, 18-25 years old accounted for 2.1%, 26-35 years old accounted for 24.1%, 36-50 years old accounted for 42.9%, and 51 years old and above accounted for 30.9%. This shows that the survey results mainly reflect the wishes of the middle-aged male group.

3.3 Questionnaire Reliability and Validity Tests

Reliability refers to the consistency or stability of measurement results. It primarily examines whether the questions in a test measure the same content or traits. Reliability does not assess the correctness of the results but tests the stability of the questionnaire itself. Cronbach’s alpha coefficient is commonly used to measure reliability.

3.3.1 Credibility survey for non-quantitative data

We first verified the IP addresses and time taken to complete the questionnaire. Random phone calls were made to respondents to confirm data accuracy, and a few representative samples were selected for in-depth interviews. All respondents indicated they answered the questionnaire subjectively, with only a few showing misunderstandings. These deviation samples were corrected or deleted to ensure the data closely reflected the true values.

3.3.2 Confidence analysis of quantitative data

In quantitative research, reliability analysis is essential, particularly for attitude scale questions. We used Cronbach’s alpha for survey data that can be quantified. An alpha coefficient above 0.8 indicates high reliability, between 0.7 and 0.8 indicates good reliability, between 0.6 and 0.7 indicates acceptable reliability, and below 0.6 indicates poor reliability. Items with a CITC value below 0.3 were deleted. If deleting an item significantly improved the alpha coefficient, it was removed, and the analysis was re-run. The results of this analysis are as follows:

TABLE 2 Reliability Analysis of Fire Apparatus Understanding

concern	Mean	Scaled variance	Correlation	square multiple correlation	Clone Bach Alpha
1、 Do you know how to use a fire extinguisher?	4.6	0.704	0.426	0.269	0.492

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2、 Have you ever used a fire extinguisher in real life?	4.28	0.446	0.308	0.097	0.588
3、 Do you recognize the following fire fighting facilities	4.47	0.493	0.459	0.248	0.414
4、 Do you recognize the following fire fighting facilities	4.57	0.626	0.435	0.246	0.457
5、 Do you recognize the following fire fighting facilities	4.63	0.833	0.268	0.155	0.574

According to Table 2, it can be seen that the overall standardized reliability coefficient on fire apparatus understanding is 0.652, and based on the reliability coefficients after item deletion, it can be seen that they are all less than the overall 0.652. Therefore, the questions on the dimension of fire apparatus understanding do not need to be adjusted.

The overall standardized reliability coefficient was 0.652, which is between 0.6 and 0.7, indicating that the reliability of this analysis is acceptable.

3.4 Questionnaire validity analysis

To ensure the rationality of the questionnaire design, we analyzed its validity, particularly for the attitude scale questions in the quantitative data. We began by assessing the KMO (Kaiser-Meyer-Olkin) value. A KMO value above 0.8 indicates excellent validity and suitability for data extraction. Values between 0.7 and 0.8 suggest good validity, while values between 0.6 and 0.7 indicate average validity. A value below 0.6 suggests poor suitability for data extraction. It is important to note that when only two question items are included in the analysis, the KMO value tends to be 0.5, which does not adequately reflect validity.

Next, we analyzed the correlation between question items and factors. If the communality value was below 0.4 (sometimes 0.5) or the correspondence was inconsistent with expectations, the item was removed. Items were deleted if they did not meet expectations, and this process was repeated until the KMO value met the required standard and the correspondence aligned with expectations. Finally, data with good validity were obtained for further analysis.

TABLE 3 Questionnaire validity analysis

KMO and Bartlett's test		
KMO Quantity of Sample Suitability	.856	
Bartlett's test of sphericity	approximate chi-square	1469.561
	degrees of freedom	171
	significance	.000

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Based on the results of Table 3, the coefficient result of KMO test is 0.856, which is higher than 0.8, indicating that the research data is very suitable for extracting information.

According to the Bartlett's test of sphericity it can also be seen that the significance of this test is infinitely close to 0 and the original hypothesis is rejected, so the questionnaire has good validity.

3.5 Independent samples t-test

The independent samples t-test is used to compare the means of two independent groups and is suitable for samples that are independent and normally distributed. The process involves first performing descriptive statistics, followed by a chi-square test, then conducting the t-test, and finally interpreting the results. This test is commonly used in experimental and observational studies to assess differences between two groups on various variables. Since gender is categorized into two groups (male and female), we used the independent samples t-test to analyze gender differences across each dimension.

TABLE 4 Analysis of variance by gender

Analysis of differences in the dimensions by gender						
variant	gender	Number of cases	Means	standard deviation	t	Sig. (bobtail)
Degree of understanding of fire apparatus	male	119	5.38	0.781	-5.293	0
	women	72	6.07	1.012		
Degree of certainty of escape in emergency situations	male	119	45.71	5.245	1.624	0.106
	women	72	44.5	4.584		

The independent samples t-test results show gender differences in various dimensions. The test for knowledge of fire apparatus is close to 0, indicating a significant difference, with women having much higher knowledge than men. However, the test for certainty in emergency escape is 0.106, greater than 0.05, meaning there is no significant difference between genders, with men being more confident than women.

3.6 One-way analysis of variance

One-way ANOVA is primarily designed to achieve a test of equality between three or more means, involves only one factor or independent variable, and needs to satisfy two principles of experimental design, namely repetition and randomization.

3.6.1 Age

Univariate analysis shows a significant difference in fire apparatus knowledge by age ($p = 0.028$). Younger age groups (18-50) have higher knowledge than those aged 51 and above, likely due to greater exposure to firefighting education.

3.6.2 Educational level

Univariate analysis revealed a significant difference in fire apparatus knowledge by education level ($p = 0.012$). Multiple comparisons showed that those with graduate and higher education had the most knowledge, followed by those with middle school or lower education, while those with high school, college, and undergraduate education had less knowledge. This suggests that while higher education may limit exposure to firefighting knowledge, those with lower education levels are more likely to be familiar with fire apparatus due to stronger firefighting education.

3.6.3 Type of work

Univariate analysis showed a significant difference in fire apparatus knowledge by job type ($p = 0.008$). Multiple comparisons revealed that medical care roles had higher knowledge than property services, security, and outsourced construction workers. This suggests that medical-related jobs have more exposure to firefighting knowledge, while other sectors have less.

Quantitative analysis of interview texts

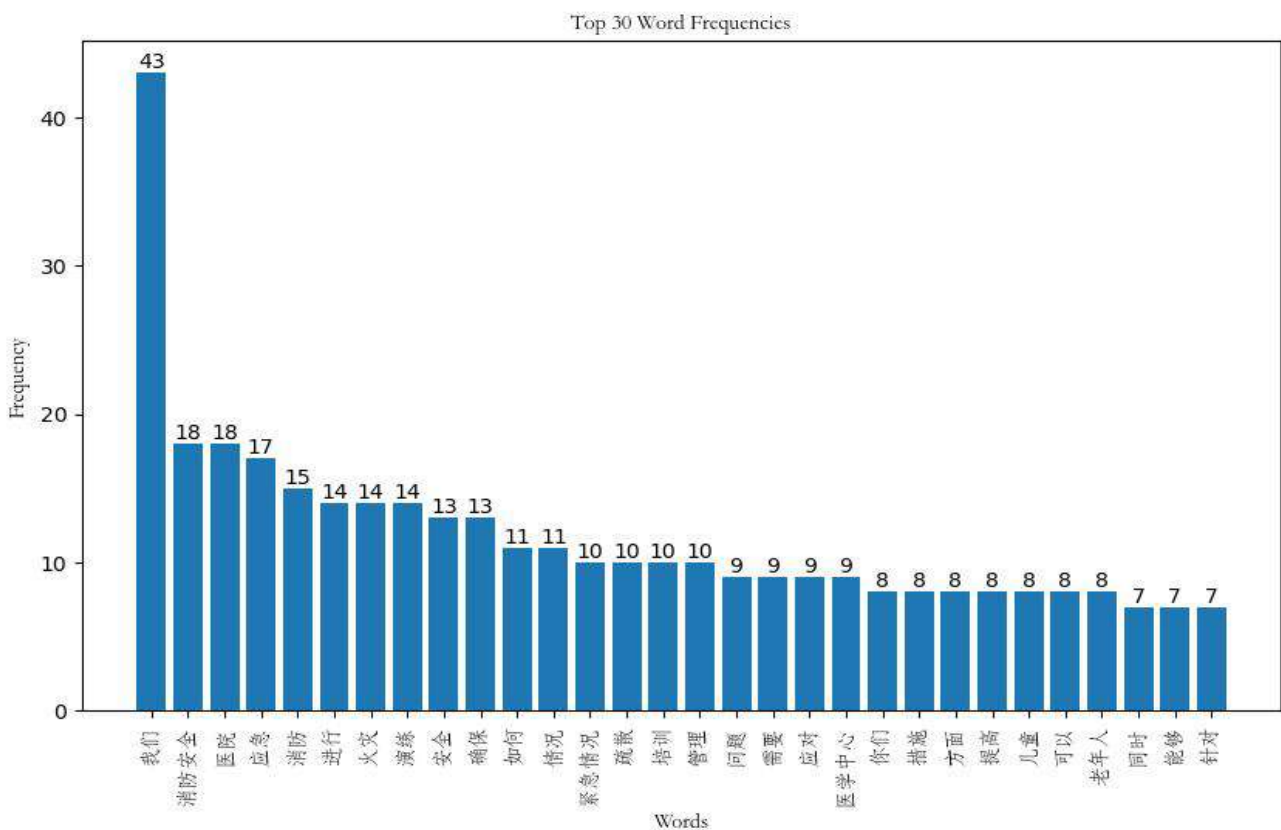


Chart 1 Word frequencies of quantified interview text

Public institutions in Shanghai cover a wide range of fields, and emergency management in large public places needs urgent attention. The research team visited the Shanghai Municipal Fire Bureau, the Mental Health Center, the Children's Medical Center and the Red Sun Nursing Home in Yangpu District, and found that these institutions need to pay attention to emergency management and fire safety to ensure the safety and stability of public places. The team deeply analyzed and discussed

the interview records of the experts, and quantified the text of the interview records to make the following analysis of word frequencies:

4.1 Fire safety

Fire safety is an important task in the management of public organizations, and the recent frequent fire incidents have attracted wide public attention. Interview records show that the public is highly concerned about fire safety. To address this issue, several measures need to be taken, such as the maintenance and updating of facilities and equipment, staff fire training, regular fire drills and popularization of escape knowledge.

The protection of fire safety requires the concerted efforts of the whole society. In addition to traditional measures, it is also necessary to continuously introduce new technologies and equipment to enhance the efficiency and accuracy of emergency escape. By investing in new technologies, such as intelligent sensing equipment and remote monitoring systems, real-time monitoring and early warning of fire risks can be realized, so that effective measures can be taken in a timely manner to reduce the likelihood of fire. At the same time, the input of new equipment can also enhance the effectiveness of emergency escape, making it possible to respond and act quickly in emergencies and effectively protect the lives of personnel.

4.2 Hospitals and nursing homes

Hospitals and nursing homes, as an important part of the public sector, are critical to safety management. In the event of an emergency, these institutions must be able to respond quickly to ensure the lives of doctors, patients and the elderly. Interviews revealed a high level of social concern for these special groups, especially in children's medical centers, where special attention needs to be paid to the special needs of children, such as the ability to escape, safety and security, and the improvement of first aid facilities. Specialized response measures should be developed for children to ensure that they receive timely rescue and care in emergency situations.

Nursing homes, on the other hand, need to pay special attention to the health conditions and daily needs of the elderly, especially the evacuation of the disabled elderly. In emergencies, older persons may have limited mobility, so ensuring their safety is an issue that needs to be seriously considered by all sectors of society. Emergency plans should consider the special needs of the elderly, such as the provision of specialized rescue equipment, the training of caregivers in emergency rescue skills, and the establishment of safe evacuation routes for the elderly, in order to ensure that they are properly cared for and protected in emergencies.

4.3 Emergency management

Emergency management is crucial for public organizations, especially as social and security challenges become more complex. Key terms like "emergency," "crisis," and "evacuation" frequently appeared in interviews, reflecting the importance placed on emergency management. It encompasses three phases: prevention, response, and recovery. Prevention focuses on reducing risks and hazards, response emphasizes quick and organized action to minimize casualties, and recovery

addresses post-disaster rebuilding. Recently, there has been a shift towards proactive prevention, highlighting the need for risk identification and early warning systems. Public institutions must recognize the urgency of emergency management and strengthen their systems to protect public safety and property.

4.4 Management and enhancement

In the daily management of public organizations, in addition to focusing on safety issues, it is also necessary to pay continuous attention to the improvement of the management level. A good management level can improve the overall operational efficiency and effectively prevent evacuation difficulties during emergencies. The interviews revealed a high frequency of words such as "management", "measures" and "improve", indicating the importance people attach to the level of management. Units need to adopt a series of measures, including continuously improving management systems to adapt to challenges and changes, strengthening staff training to enhance their ability to cope with emergencies, and focusing on improving management efficiency by applying technological and management tools to enhance the efficiency and quality of management work.

Conclusions and recommendations

5.1 Conclusions

5.1.1 Difficulties with live training and evacuation drills for large special public places

In large special public places like hospitals, nursing homes, and psychiatric hospitals, practical training and evacuation drills face several challenges. Safety risks arise due to the nature of special populations, making it difficult to prevent harm during drills. The large number of elderly and physically diverse patients complicates simulating realistic evacuation scenarios.

Additionally, the structure and facilities of these places, such as restricted areas, limit disaster scenario simulations. Healthcare workers, lacking experience, struggle with evacuating special populations, affecting the effectiveness of drills. Lastly, patient privacy and mental health must be prioritized during training to avoid negative impacts. These issues require careful handling to ensure patient rights and safety.

5.1.2 Existing emergency evacuation system does not consider the locomotor ability of disabled and handicapped persons

Existing studies show that while particle simulation methods are widely used for crowd evacuation, they have limitations in simulating the evacuation of people with disabilities. These methods fail to account for individual mobility differences, such as those of wheelchair users, visually and hearing-impaired individuals, who require special facilities.

Furthermore, these simulations neglect the psychological and behavioral factors that affect disabled people during emergencies, such as heightened stress and slower decision-making. To improve accuracy and reliability, these factors must be incorporated into evacuation simulations.

This research highlights the need for more inclusive and realistic simulation methods in urban safety and emergency management to better accommodate people with disabilities.

5.1.3 New neighborhoods on the adaptability of firefighting equipment, old neighborhoods face "difficult to transform" problem

New neighborhoods benefit from advanced fire protection technologies, such as intelligent fire alarms, automatic sprinklers, and smoke detection systems, which enhance system performance and responsiveness. However, old neighborhoods face significant challenges in upgrading fire facilities, including aging equipment, high costs, and complex building structures that hinder fire escape efficiency. Additionally, residents' lack of fire safety awareness and self-rescue skills further complicate retrofitting efforts. Factors such as budget constraints, construction timelines, and resident cooperation also impact progress. This research emphasizes the need for targeted solutions to improve fire safety in both new and old neighborhoods, highlighting the importance of technological innovation and community engagement in urban safety and emergency management.

5.2 Suggestion

5.2.1 Individualized evacuation plans through on-site observation to collect data on people with disabilities

To develop effective evacuation plans for people with disabilities, field observations should be conducted to collect data on their mobility, use of aids, and obstacles they face. This includes observing their movement patterns and conducting interviews or surveys with individuals and caregivers to understand their specific needs. The data collected will inform the creation of tailored evacuation plans that provide accessible routes, necessary assistive tools, and specialized evacuation guidelines. Psychological and emotional support must also be considered to ensure their safety and well-being during emergencies.

5.2.2 Multi-party coordination promotes consensus improvements in older neighborhoods from infrastructure to safety

To improve fire safety in older neighborhoods, comprehensive inspections of fire facilities should be conducted to ensure effective fire escapes and adequate equipment. Modern fire protection technologies, such as smart fire alarms and automatic sprinklers, should be introduced based on the neighborhood's needs. Public awareness campaigns are essential, and collaboration between the government, community, and property management is key to successful renovations. Increased investment, policy support, and resident participation are critical to overcoming challenges and improving fire safety.

5.2.3 Virtual simulation training using a combination of live modeling and virtual reality (VR) technology

To address challenges in live training for large public places, a combination of live modeling and virtual reality (VR) should be used to simulate complex emergency scenarios. This allows

healthcare workers and security personnel to experience interactive, personalized training tailored to the evacuation needs of special populations. Effective training schedules should be implemented to ensure full participation and improve professionalism. This method also protects patient privacy and enhances training effectiveness, reducing risks during real emergencies.

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Research on the Application of RPA+AI Technology in the Construction of Paperless Intelligent System for Finance in Colleges and Universities

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Abstract

The application of Artificial Intelligence shows stage-by-stage development with technological progress, and AI technology empowers the development and transformation of university finance in the era of big data. Through relevant literature, this paper explores the application of RPA (Robotic Process Automation) technology to university finance systems. This paper adopts a literature review methodology and analyses a large number of reports, academic papers and articles in a comprehensive manner. By searching the Knowledge Network, Literature and Wikipedia databases, it compares the application of artificial intelligence in the field of relevant research finance, and finds out that the application of artificial intelligence and RPA technology in university finance is still in the preliminary stage, with limited application scenarios. However, in the long run, the application of RPA+AI technology in university finance is bound to be extremely important. This study identifies the significance of constructing an AI intelligent tool RPA technology model in the current transformation of financial system information digitization in colleges and universities, and the construction of the application of RPA+AI technology model in the scenarios of expense reimbursement and budgetary control business system, financial reconciliation business system, business operation system, and risk control system, etc. The study also focuses on its application in the existing intelligent information technology. And for it's in the existing intelligent information technology transformation process RPA technology in various scenarios application encountered problems and construction. This technology model provides a new perspective of digital transformation for universities and also provides an effective reference for the construction of paperless system functions. data, enhancing data security protection and risk management, and strengthening the construction of the professional team of accounting informatization.



Full Text Article



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Keywords: RPA+AI, Finance robot, Artificial intelligence, Paperless intelligence system, University finance

1. Introduction

The "14th Five-Year Plan for the Development of the Digital Economy" puts forward the development goal of China's digital economy towards full expansion by 2025. Artificial intelligence (AI) is the core of the digital economy. Guo K & Liang X (2016)^[1] discussed the rapid development of AI and the digital economy. AI and informatization have been merging and intersecting with various industries and are also changing the mode of accounting applications. The introduction of robotic process automation (RPA) in 2012 provided an opportunity for the digital accounting transformation in colleges and universities (YingP Zhang & Fang Gao & Jingy Zhao (2023)^[2]. The construction of paperless intelligent system should be the key focus point and reform impetus for the digital transformation of finance in universities. Green paperless is a green development strategy to achieve energy saving and emission reduction, and to realize the goal of "dual-carbon economy". Wang YunY (2024)^[3] pointed out that in order to achieve the goal of "dual-carbon" strategy, the construction of an intelligent, green and efficient paperless system should be carried out to empower the financial accounting field. The construction of a smart, green and efficient paperless system to empower the digital transformation of the financial accounting field is a research topic of great significance. Based on the above, "paperless reimbursement" is the main search keyword, and the research results have explored the significance of paperless reimbursement system construction in empowering the process of digital transformation of finance, and RPA is the main technology to realize the paperless reimbursement system (Wang Yidan, 2024)^[4]. "Operate like a pair of hands", it is a combination of artificial intelligence and robotic process automation. RPA technology is constructed in the construction of paperless intelligent system for finance in universities in various scenarios. This technology is to automate daily accounting operations by mimicking humans and interactions. This technology frees traditional accountants from complex, cumbersome and repetitive daily business work and devotes more time to financial analysis, data analysis and other work. In this paper, the application of RPA+AI technology in paperless reimbursement system for university finance is sorted out, and the application scenarios and problems to be encountered with this technology are initially discussed. In the face of related challenges and the current situation, the proposed innovative scenario construction provides a reference for the feasibility of digital and intelligent development of finance in the future.

2. Literature review

With the emergence of Robotic Process Automation (RPA) in 2012, the finance industry is undergoing a technological transformation, and according to Zhang Min (2020), the change in the finance industry is mainly due to these three elements: Artificial Intelligence (AI), Intelligent Tools (RPA and BI), and Big Data Analytics^[5]. KDDI has combined the idea of "AI+IT" to develop robots such as reporting robots and accounting robots, thus accelerating the pace of RPA in accounting applications (Duan, Dawei & Wang, Hongxing et al. (2020))^[6] In March 2016, Deloitte Consulting collaborated with the Kira system to introduce RPA into the accounting industry. In March 2016, Deloitte Consulting partnered with Kira system to bring RPA to application scenarios in accounting, auditing, financial reporting, tax planning, etc. RPA process automation robot is a blend of software process automation and AI technology. It is a responsive, efficient and cost-safe and controllable digital empowerment management technology, so the essence is that the

combination of RPA + AI technology and financial accounting has produced financial robots, which are used in the financial field. Financial robots are defined by IT media Tech Target as the most loyal "digital employees" of an organization. It helps create transcription scripts that automate routine and predictable data processing by leveraging a combination of user interfaces and surface-level features. These transcribed scripts are then used as a virtualization workforce to replace the traditional manual workforce for a variety of high-volume; mechanically repetitive financial processing tasks. RPA also automates business processes, keeping corporate rules and work behaviors in mind. Finally, a series of specific workflows are automated by simulating the way robots work. In fact, it is a software that can complete the work according to a specific, and this software is installed on personal computers or large servers to automate the office through manual operations such as mouse or keyboard (Cheng ping, 2022)^[7]. Finance Robot is a financial technology application that replaces traditional manual work with the technology of RPA combination. RPA+AI technology is beneficial to optimize the whole process work such as financial reimbursement, financial bookkeeping, financial accounting, generating financial statements and so on. This technology not only allows financial personnel, financial operations and information technology systems to integrate and collaborate, but also greatly reduces the cost of financial operations and improves the efficiency and quality of work. The financial robot completely replaces the hands of financial personnel. Du Haixia et al (2021)^[8] based on practice, it is proposed that RPA can add to promote the conversion of financial functions and objectives, change the business process and financial organizational and management modes, and promote the transformation of traditional personnel to composite talents. The application of RPA+AI technology in financial data analysis can provide a good environment for financial data to empower business management.

With the development of artificial intelligence and big data, the traditional financial efficiency, transparency and data integration can no longer meet the development needs of universities. More and more colleges and universities have been transforming in this direction with the emergence of "Digital Intelligence Finance and Accounting". The current research on the construction of paperless reimbursement system and key technologies is still relatively blank. In this paper, we mainly consider the practice and challenges of applying RPA technology in paperless intelligent reimbursement system in colleges and universities. Analyzing the current situation and limitation analysis of the current RPA+AI technology application in universities, the main application scenarios considered for the intelligent process-oriented model of RPA+AI technology are the expense reimbursement and budgetary control business system, the financial reconciliation business system, the business operation system and the risk control system, the bill management, the personal tax declaration, the bank reconciliation, the travelling reimbursement and the business question and answer scenarios respectively (Huang Jiali ,2024)^[9] for research and study.

3. Methodology and Procedures

In this paper, a systematic literature review method and a questionnaire survey method were used. Firstly, the literature review method involves the study of academic articles, research papers and reports. This method focuses on identifying the key terms "RPA in college finance", "paperless

reimbursement system for college finance", "artificial intelligence and accounting", "technological innovation and accounting change", and "intelligent finance in universities" were searched in GOOGLE Academic Library, Knowledge.com, etc., and the articles were identified. Then the literature for the period 2020-2024 was reviewed with the integration of literature on the application and exploration of RPA technology in financial systems, with a particular focus on the application in smart paperless financial systems in universities. This literature review method is a repeatable and large search strategy so that it can be ensured that literature on relevant topics and specific words are searched for citations to PATTI & LORUSSO (2018) ^[10]. Secondly, the questionnaire method is to use a uniformly designed questionnaire, through which the questionnaire form is used to communicate with the respondents in written language to collect the questions of the research subjects about the issues that need to be investigated. Integrate the questionnaire answers to analyze the relevant reasons. The main design of this paper is based on the application of artificial intelligence RPA technology in accounting. The main respondents of the questionnaire are the administrative and financial staff of the university. The key questions of this questionnaire design revolve around "the degree of understanding of the application of AI RPA technology in accounting work" , "the prevalence of the application of Artificial Intelligence (AI) RPA technology in accounting work", " The degree of use of RPA technology in daily accounting work", "The degree of help of AI and RPA technology in daily accounting work" and other 15 professional questions, 1-2 regular questions, the questionnaire is distributed mainly by the network survey questionnaire. These questions were used to explore the current status of the application of RPA+AI technology thereby analyzing the challenges encountered by RPA technology in the practice of paperless financial intelligence building in universities. The paper acknowledges the respondents for filling the questionnaire by ensuring proper citation of the sources used in the literature review and also for filling the questionnaire. The limitations of both methods of research are if the selection of literature may be biased than may be overly dependent on the dependence of existing research findings. Also, the quality of the survey results can be affected by the respondents' perfunctory answers during the completion of the questionnaire for various reasons. And the survey questions are pr-designed to answer the answers, resulting in a lack of flexibility.

4. Application of RPA+AI technology in the construction of paperless intelligent system for finance

4.1 Analysis of the current status of paperless intelligent systems for finance

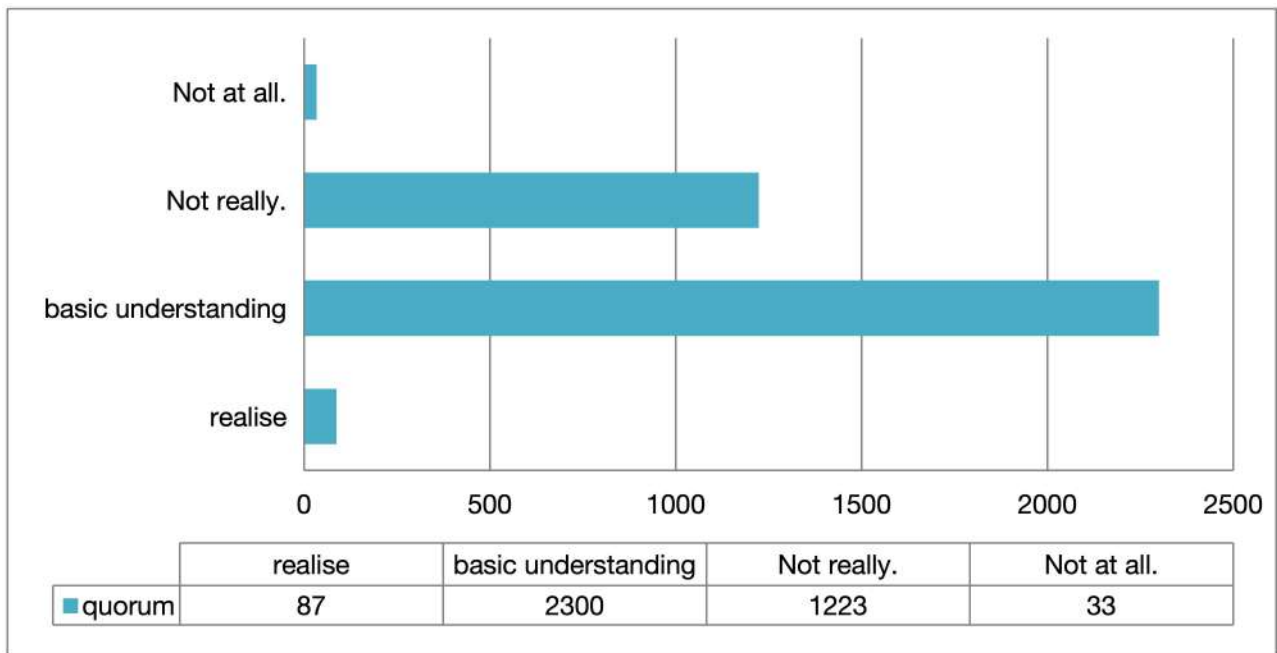
With the widespread involvement of artificial intelligence in finance, financial robots RPA, instead of human beings, automate rule-based, heavily repetitive tasks such as invoice processing, tax filing and financial statements. Enterprises and universities use PRA technology to automate operations such as business and financial reconciliation, reimbursement operations, banking and corporate reconciliation, and invoicing. Financial robots are also applied to various business processes, such as expense reimbursement, procurement to payment, general ledger to statement, tax management and budget management. At the same time, the classification of financial robots

has become more and more refined, and today there are different types of robots such as invoice robots, reconciliation robots, tax robots, archive robots, etc. (Pan Yan, 2024)^[11]. The wide application of RPA+AI technology has resulted in the systematic, paperless, and fully electronic financial processes. The implementation of the technology drastically reduces the reliance on paper documents, which in turn improves the efficiency and transparency of the entire process. The application of paperless financial intelligent system also corresponds to the policy of energy saving, emission reduction and green development. The paperless process also reduces costs and improves efficiency. Under the guidance and support of the policy, paperless intelligent system is already in enterprises and institutions to get practical application. The "2023 Invoice Index Report"^[12] released by Every Moment Technology Ltd. shows that according to the annual data of 2023, the total number of circulating invoices on the reimbursement platform of Every Section is 18,971W+, of which the proportion of electronic invoices is 50.38%, which is 75.18% higher than that of the use in the year of 2022. Paperless reimbursement of documents compared to 2022 increased by 5%, this data shows that the financial industry has been transformed to intelligent paperless, has been gradually implemented and applied to show that this financial paperless application is a general trend. However, there are still many difficulties and challenges in the process of financial change, it takes a period of time to implement in order to completely change from paper to paperless financial office.

4.2 The current status of RPA+AI technology in the application of paperless intelligent system for finance in universities

In order to understand the current status of the application of RPA+AI technology in university finance, this paper adopts a questionnaire survey method, which is distributed and collected by "Questionnaire Star" or by mail and email. The survey was designed with 15 questions, all of which were multiple choices. A total of 3643 questionnaires were distributed, and all of the distributed questionnaires were collected. Through the collation and analysis of the recovered questionnaires, the current status of the application of RPA+AI technology in the paperless intelligent system of finance in colleges and universities is as follows: first of all, most of the accounting personnel in colleges and universities have a certain degree of basic understanding of the RPA+AI technology, but there is still a part of the accounting personnel who don't really understand the technology and have a limited understanding of it (see Figure 1 and Figure 2). Accountants have a weak concept of intelligence and have not yet fully shifted from the traditional accounting model to the new technology model. Universities have also not fully popularized RPA+AI technology and have not paid attention to raising awareness of smart finance learning for finance staff. The information technology level of financial personnel is still low, and there is a lack of "financial + information technology talents". Currently, some colleges and universities are still using the traditional paper-based model, the complicated and repetitive review of documents, billing and other work has taken up part of the financial staff's working time. Financial personnel have not been able to put more time on the learning of intelligent technology, it is difficult to understand the new technology and adapt to the construction of intelligent systems.

Figure 1 Level of knowledge of AI+RPA



Technologies

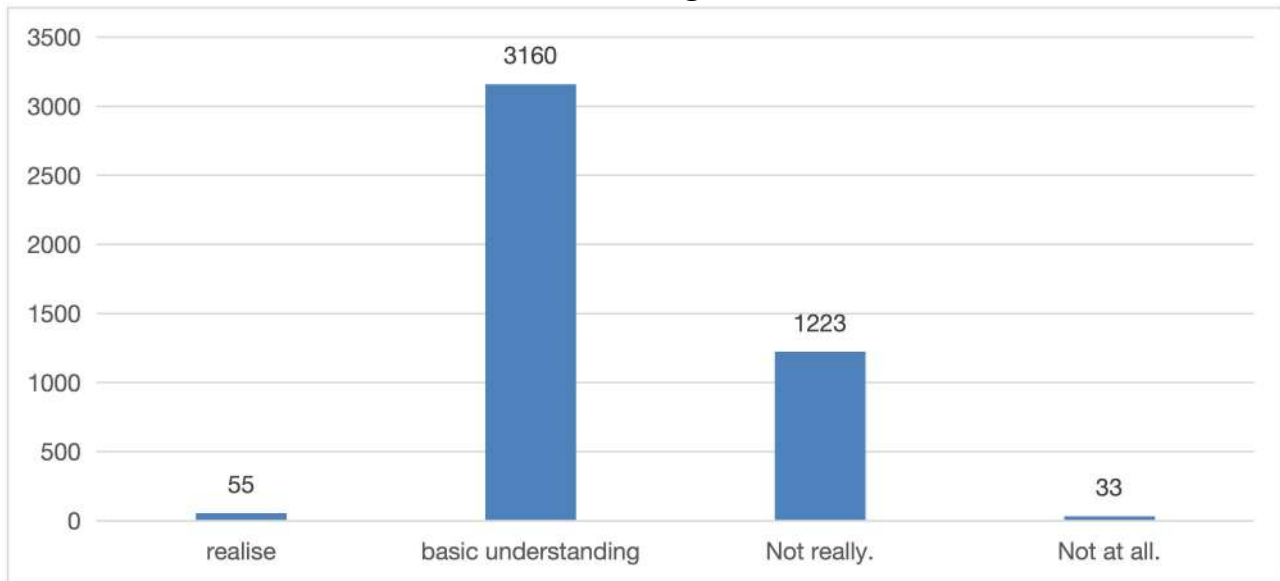


Figure 2 Knowledge of AI+RPA technologies for accounting applications

Secondly, the questionnaire (see Fig. 3, Fig. 4) found that most of the respondents believed that RPA+AI technology would be helpful in the future accounting work. Although, most of the accounting workers in universities believe that AI+RPA technology will be commonly used and will bring convenience to their work. However, the financial work of universities has been using financial robots or paperless financial systems of RPA + AI technology only 33% of universities

and financial workers. Most of the colleges and universities do not purchase and use relevant AI RPA financial systems. The profitability of colleges and universities is not the same as that of enterprises, and the main sources of funding for colleges and universities are financial allocations and tuition income as well as research and development income from various subjects and projects. Most colleges and universities are too cash-strapped to meet the capital requirements for the construction of financial intelligence systems. This also leads to the low degree of use in universities.

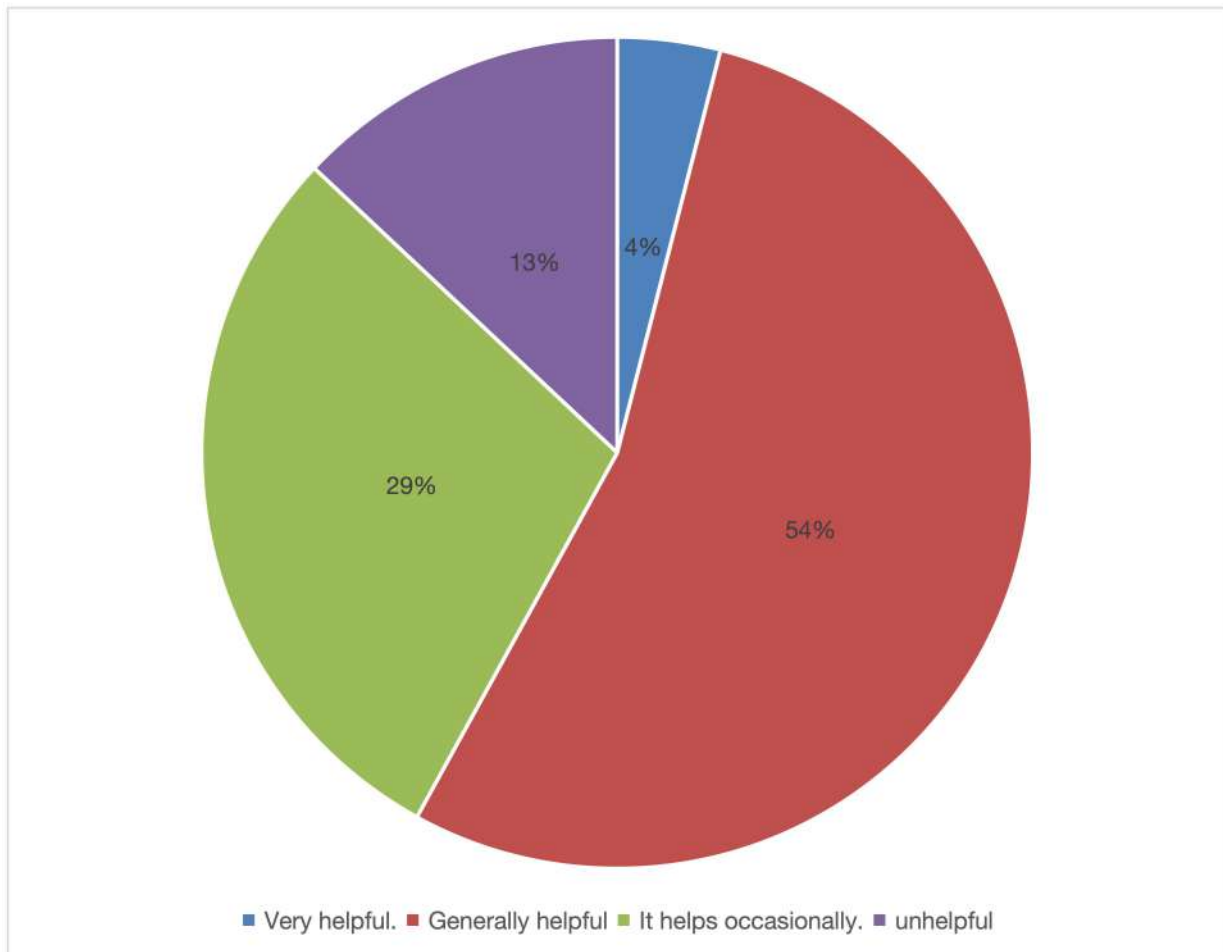


Figure 3 Extent to which Artificial Intelligence RPA technology helps in day-to-day accounting work

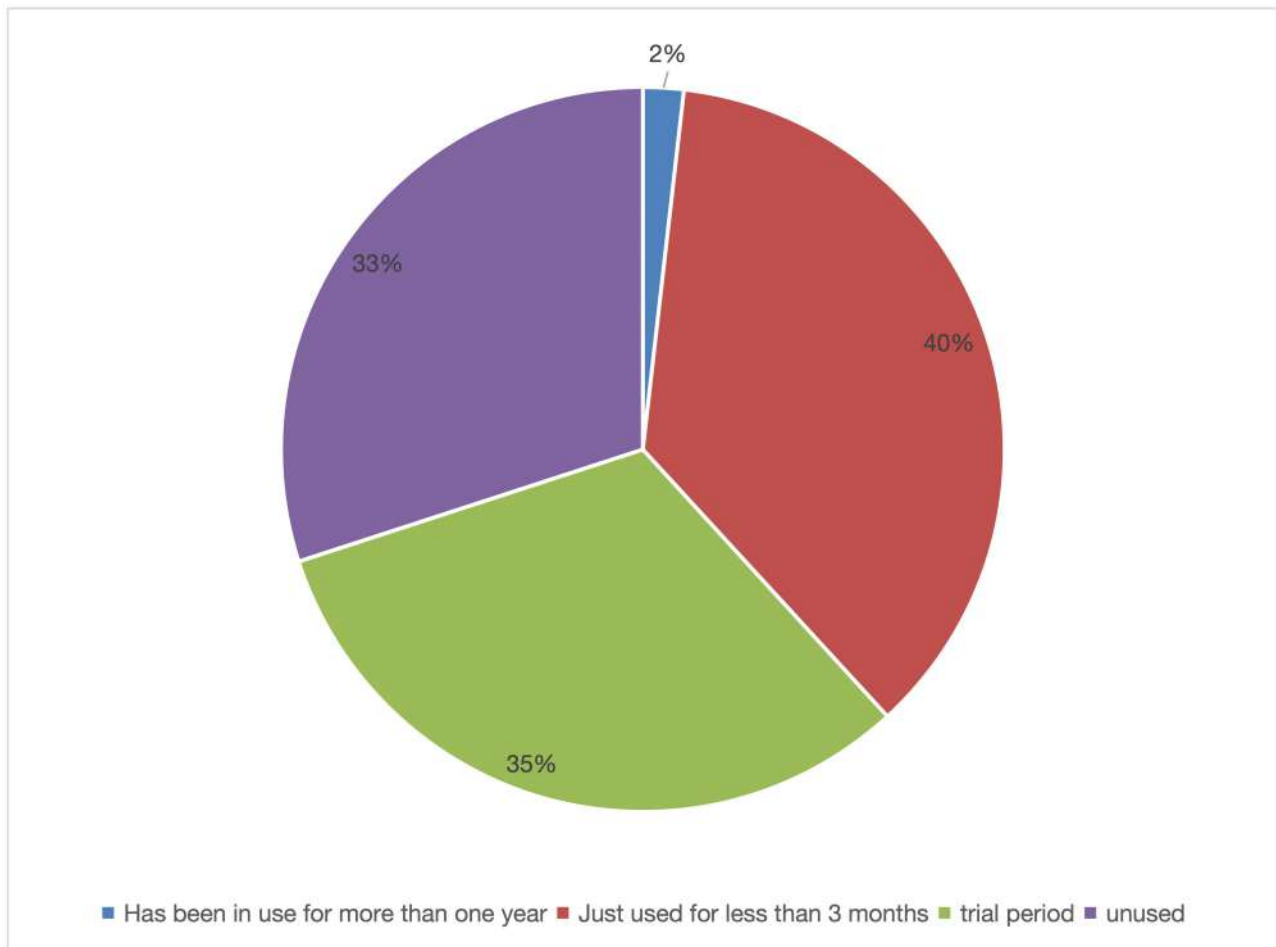


Figure 4 Extent of use of AI RPA techniques for daily accounting work

4.3 Application of RPA+AI Technology in the Construction of Paperless Intelligent System for University Finance

Colleges and universities, as a gathering place for high-quality complex talents, have more obvious advantages in financial expertise and talents. Colleges and universities in the "double first-class" construction background, higher education and talent cultivation as the country's key concerns. Although the impact of the overall economic environment, the total amount of funding arrangements to reduce the financial and project research financial investment which is still huge. At the same time, the professional development of higher education institutions and the introduction of talents are constantly strengthened to improve the performance of the use of funds, so as to achieve the precise allocation of resources. And RPA+AI technology then plays a very important role. The maturity of the Internet of Things, information technology and big data and other technologies, colleges and universities are also constantly strengthening the capacity and scope of data processing. In the construction of intelligent campuses, many colleges and universities have also gradually opened the threshold between online and offline, which has led to a reasonable and effective flow of interdisciplinary, cross-campus, cross-campus, and cross-level business in colleges and universities. In the era of big data information technology, RPA+AI technology is constantly

changing the traditional mode. AI technology simulates the human brain thinking mode through computer and transforms the intelligent body that acquires perception and performs actions in the environment. According to Bill Gates^[13], "Artificial intelligence is just now being discovered, with computing power doubling every three and a half months. In addition to improvements in processing data, it has the ability to synthesize analyses, look at gain insights and make predictions in many more dimensions than humans can comprehend". RPA is Robotic Process Automation, the technology that can automate repetitive, standardized tasks under Artificial Intelligence (AI). After Deloitte Consulting Services launched a small financial robot "Small Deloitte people" in 2017, the application of PRA technology to financial accounting work quickly began to be applied and developed in many financial scenarios. RPA technology has also been selected in the "Top 10 Information Technology Selection Report Impacting China's Accounting Industry (Practitioners)" released by the Intelligent Finance Research Institute of the Shanghai National Accounting Institute. Gartner Internet Data Information Network (2023)^[14]'s "China ICT Maturity Curve 2023" suggests that RPA is entering a trough period. In any transition to a technological revolution, there is a period of time where there is a shift in thinking, specialisms and other training. So although it is in a trough, with the development of information technology this does not mean the disappearance of the application of the technology in financial scenarios (Liu Qin & Shang Huihong, 2020)^[15]. On the contrary, Zhang Limin & Bi Ying (2024)^[16] pointed out that the current AI + RPA technology is still in the trial exploration stage, but driven by artificial intelligence, RPA technology in the financial voucher review, reimbursement pre-approval, billing and payment, entry, bookkeeping and other processes are still showing a wide range of application scenarios.

4.3.1. Note management scenarios

The business scope of colleges and universities is constantly expanding, and the sources of subjects are also more diversified and require more kinds of bills to be issued. It is not only the previous bills such as students' tuition fees, accommodation fees and utility bills, but now it involves other businesses such as subject income. By sorting out the entire process from the application to the issuance of invoices, the standardization of the filling criteria of the invoices reduces the error rate of invoicing. Combined with RPA technology, it can automatically and intelligently judge the types of invoices to be issued and classify the types of tax invoices to perform the corresponding invoicing actions. After the execution of the invoicing, it can automatically notify the operator by SMS or email, which can save the invoicing time and reduce the red flush work after the paper invoices are wrongly issued. At the same time, according to the national policy on 1 December 2024 to fully implement the application of digital electronic bills.

4.3.2. Personal tax declaration scenario.

Universities have a large number of employees plus off-campus laborers, and the data on labor fees are informative and complicated, although there are payroll systems and EXCEL software for automatic calculation and related tax data everywhere. However, due to the large amount of data and more, it is easy to data errors and the need to set up a special post in the Ministry of Finance

and the Ministry of Human Resources. The payroll and personal tax processing need to set up specialize positions. The introduction of RPA+AI technology has enabled a smooth flow of information from multiple departments. Individual tax filing has adopted a human-robot combination to sort out the process of data processing and miscalculation of filing drafts, and set up multiple response modes. The robot will be able to simulate manual filing actions, and the combination of manual secondary auditing will significantly improve the efficiency and accuracy of data processing. It is expected that the overall work efficiency can be greatly improved by more than 5 times than the original.

4.3.3. Bank and school reconciliation scenario.

Bank reconciliation is an important part of the whole fund management chain, which is the focus of control of daily funds and research project funds, etc., and it is a necessary process for auditing. The traditional manual reconciliation should first log into the bank's corporate online banking through CA certificate verification, and download the electronic bank statement EXCEL format file. Then according to the bank journal data files, the data will be matched to deal with the receipt and payment records that cannot be matched, manually categorized under the category of outstanding items after the preparation of the bank balance reconciliation statement. If we only rely on the banking platform, the manual download and data matching operation of the EXCEL format file can be efficiently achieved on the platform. However, there is no way to automate the matching of a bank deposit credited in the account processing while the actual flow is multiple or batch payments. The unmatched flows can only be found through the accounting processing and initial business documents. This process is very time-consuming and reduces work efficiency, and also affects the timely issuance of subsequent relevant reports. Through the application of RPA+AI technology, the rules of manual reconciliation can be sorted out and transformed into robot language. This can automatically match the relevant business processes according to the logical thinking of the outstanding accounts, and can automatically prepare the balance reconciliation table and the status table of the relevant special circumstances. Combined with RPA+AI technology it will be possible to identify outstanding accounts and accounting problems in a timely manner. This not only improves the efficiency of reconciliation, but also guarantees the accuracy of the data, so that the original need for more than 2 weeks of manual reconciliation can be greatly reduced to half a day or even a day to complete.

4.3.4. Reimbursement pre-approval scenarios.

In the current university reimbursement process, students and faculty use paper reimbursement forms which can lead to duplicate revisions of lost reimbursement forms and other situations. Students and faculty need to go back and forth to the finance office several times to modify the documents until they are individually reimbursed. This whole process leads to a long reimbursement cycle and a cumbersome process. After the application of RPA+AI technology, students and teachers only need to upload the reimbursement materials and then the RPA technology can automatically capture the materials. Combined with OCR (Optical Character

Recognition), the bill information captured automatically generates an electronic reimbursement form, which the claimant can initially self-check to confirm that it is correct before submitting it. The RPA technology provides a list of reimbursement information, reimbursement criteria, and other rules based on predefined reimbursement types for pre-approval. If a claim is submitted that does not meet the criteria, a warning is issued and the claim is returned directly online with an explanation of the reason. Documents that meet the criteria are automatically audited.

4.3.5. Billing and Payment Scenarios.

Within the system of finance, by breaking down the billing process into each step then RPA technology can simulate each step of the manual process. Automatically extract the required information to generate accounting vouchers and related documents, and go to the implementation of the documents to check whether they meet the standards. The application of the new technology can not only effectively reduce the errors in the preparation of documents, but also improve the efficiency of the preparation of documents to alleviate the work pressure of accounting staff. At the same time, in the traditional manual bookkeeping, accountants and cashiers need to repeatedly check the transfer unit's bank card account name, account number and bank account and other basic information, very easy to produce errors. Under RPA technology, account information can be called directly from the system database, and data matching can be completed in an efficient and error-free way. And through the docking of data with the banking system, it can directly execute the payment of money without the need for the cashier to repeat the entry and review procedures for payment. Most importantly, RPA technology can also track the payment status in real time through the preset payment process monitoring mechanism to ensure the accurate and error-free flow of funds. This greatly increases the security and accuracy of the payment process.

5. Limitations of the application of RPA+AI technology in the construction of paperless intelligent system for university finance

RPA+AI technology meets the process requirements of financial reimbursement due to its process-oriented nature, its ability to automate repetitive tasks, its strong rule-based nature, and its ability to reduce the risk of human error. As a result, the technology has become very popular among finance practitioners and researchers. Some smart finance researchers believe that RPA +AI is one of the fundamental technologies that need to be particularly explored (Dechow P,&Ge W,Larson. 2011)^[17] . However, up to now, there are still many theoretical problems and application difficulties of RPA that need to be researched and solved in the practical application scenarios of finance (Liu Yang&WangYahan etl, 2023)^[18] .

5.1 Business processes struggle to cope with complex scenarios

Taking the university reimbursement as an example, RPA demonstrates incomparable advantages of manual work when dealing with tasks such as high degree of standardization, clear rules and large volume. However, it is still unable to cope with the complex and changing financial

reimbursement scenarios. For example, when teachers and students are reimbursed for their teaching and research expenses, the bills, lists, and other supporting materials that need to be provided for different expenditure items often differ in type and format. Coupled with the fact that the standard of each item of expenditure is not the same, it is difficult to form unified processing norms. As a result, many key nodes in OA reporting still require manual intervention for judgment. Current RPA technology, which usually operates on the basis of predefined rules, is not yet flexible enough to handle such unstructured data (e.g., supplementary materials that require special explanations for a particular situation) and may not be able to respond appropriately.

5.2 Difficulty with manual interaction tasks

In the financial reimbursement process of colleges and universities, the return of reimbursements from students and faculty due to various problems such as non-compliance of bills, missing materials, etc., can lead to a large number of financial inquiries. Therefore, sometimes it may even cause dissatisfaction or complaints from students and teachers. As the language expression habits of teachers and students vary from person to person in the process of counseling, RPA operates based on preset logic when dealing with this kind of high-level human language, and lacks the ability to accurately understand the essence of the problem and identify emotions. This means that RPA may not be able to effectively address the issues raised by teachers and students, or properly calm them down.

5.3 Difficulty in handling non-routine operations

In the financial process, some unconventional scenarios are often encountered, such as the reimbursement of special projects and expenditures in emergency situations. These situations usually require flexible judgment and decision-making, and RPA technology is not yet fully capable of handling such complex tasks. Especially in the face of the need to consider a variety of factors in order to make the optimal decision, the limitations of RPA are particularly prominent.

6. Innovative Construction of RPA Technology in Paperless Intelligent System in Universities

In order to comply with the trend of intelligent change, accelerate the transformation of financial intelligence. As the frontier of research and education, universities should promote the digital transformation of finance with the ultimate goal of building an intelligent financial system. The design of paperless intelligent system as the core of the financial system construction process, it is urgent to deeply integrate modern intelligent technology, and then build a set of digital intelligent structure to support the development of future intelligent financial system. Under the background of the current rapid development of artificial intelligence technology, AI technology has been widely used, with "RPA + AI" as the representative of the intelligent process automation technology (Intelligent Process Automation, IPA) as a cutting-edge results. Therefore, some scholars have proposed

to construct the "ChatGPT+ RPA" technology framework, which is of far-reaching significance for creating an intelligent interactive financial system (Chen Wei, 2023) ^[19]. However, we also see that, in view of the current situation of "electronic + paper" co-existing in the financial system of colleges and universities, the integration of RPA and AI technology takes into account the transition needs of the digital transformation of college and university finance. Especially in financial work, data and process rigor is critical, fully automated and intelligent technology solutions are difficult to implement in the short term. Therefore, it is necessary to build an IPA technology model with appropriate human involvement. This can not only smooth the transition to fully automated processes, but also give full play to the advantages of human-computer collaboration in the transition process, and better serve the modernization process of university financial management.

6.1 Pre-approval system

The pre-approval system can greatly alleviate the pain points of "difficult, long and complicated procedures" when students and teachers make reimbursements from the source. Through the use of mature OCR technology, teachers and students can upload invoices and supporting materials to the reimbursement system in the form of pictures or scanned documents. The system converts the uploaded information into computer-readable data format through relevant technical means. It also utilizes IPA technology to intelligently capture and identify them. Based on the preset rules of the system, the system preliminary approves the completeness and compliance of the materials. For the part that does not meet the requirements, the system timely warning prompts, and feedback to the reimbursement of specific comments. The application of the pre-approval system can not only significantly reduce the workload of the financial staff, but also significantly reduce the reimbursement return phenomenon due to non-compliance of the supporting materials and other reasons.

The intelligent Q&A system mainly covers the information query, interactive Q&A part to address the claims of the reimbursement personnel in the whole reimbursement process. The system should be equipped with rich image and video recognition capabilities, text retrieval technology, and advanced language understanding and interaction technology. Users can ask questions to the system through voice commands, and the intelligent Q&A system parses the semantics with the help of natural language processing and deep machine learning, and retrieves relevant information in the financial database after understanding the user's intention. Then it combines the advantages of AI in advanced language to provide feedback to the user in the form of accurate, timely, natural and fluent language. This approach not only improves the efficiency of problem solving, but also enhances the user experience, making the entire reimbursement process smoother and more efficient.

6.2 Intelligent Business Operation System

Relying on IPA technology, the Intelligent Business Operation System assists financial staff in efficiently completing various business processing tasks, mainly document review, voucher entry, payment and other aspects. Compared with the traditional business processing mode, the system is

more accurate and efficient in the automation of reimbursement process, information processing and financial data integration, which not only can effectively assist the financial staff in completing the tedious work of document verification, filling out and making orders, data checking and voucher production, but also helps to build a more intelligent and perfect green financial system that reduces costs and increases efficiency. The application of "RPA+AI" technology in the business process is extremely wide, which can not only realise the automation of repetitive and standard work and the intelligent collection and integration of structured data, but also cope with complex business scenarios. For example, in the budgeting of university funds, IPA technology can be combined with policy changes, the impact of the student population and other uncertain factors, rapid analysis and calculation based on the revenue and expenditure model to assist colleges and universities to make scientific budget decisions. The system can also realize the "integration of industry and finance". At present, some colleges and universities financial system still exists in the form of data silos, with the Student Affairs Office, Academic Affairs Office and other departments of the information is not interoperable, such as in the tuition fee reminder link, the student management department cannot be directly through the system real-time access to financial systems in the student payment information. This will not only cause a waste of resources, but also due to the poor flow of data between different systems, resulting in frequent reimbursement "blockage" and inefficiency. In order to completely improve this situation, through the combination of API (Application Programming Interface) technology + OA (Office Automation) system, IPA technology can unify the external data of the financial system interface. Then it can be linked to different platforms, ultimately forming a financial information sharing platform to achieve the integration of various types of business and financial processing.

6.3 Intelligent Data and Risk Control System

Intelligent Data and Risk Management System (IDRMS) are a system that monitors and manages data calls, which processing and storage performed by databases throughout the financial system using IPA technology. This is a system for risk monitoring of the reimbursement process and financial data. The system is also the fundamental guarantee and technical support for the safe realization of the whole process of paperless. The amount of financial data in universities is large and complex, and the application of IPA technology helps to improve the speed and quality of financial data acquisition. First of all, IPA technology can classify and store different data types, such as user database, financial list database, report database, business list database, etc. IPA can be used to call data from different databases with the corresponding permissions when the financial personnel need it, and present them in the front-end interface in a visual way. At the same time, in order to ensure the security and closure of the data, IPA technology can judge the user rights in the API response, and call the altered data into the data cache for legitimacy and compliance comparison to ensure the integrity and legitimacy of the financial data. Secondly, in terms of processing unstructured data, RPA technology can capture data according to the rules set by the financial staff to form samples and transfer to the data processing process, in which AI technology can screen and parse the data, and carry out deep data mining to form analysis results for decision-making. Finally, the results are presented in the form of visual financial statements, such as balance

sheets, income and expenditure statements of universities. These analyses reveal the trends and connections behind the core data, providing valuable insights for the university departments. Finally, IPA technology enables real-time data monitoring during the paperless reimbursement process, such as automatically storing, tracking, tagging, and recording the operation records and dialogue contents in the paperless reimbursement process, so that each reimbursement can be traced back to its source and traces can be traced back to the source, which improves the efficiency of the university's financial management work, and helps in risk control and improvement of problems.

7. Conclusion

The development of the digital era has provided opportunities and brought new challenges to the financial transformation of universities. In this paper, through in-depth analysis of the current situation and limitations of the application of RPA technology in paperless intelligent systems in colleges and universities, with the support of more mature OCR, OA, API and other technologies, combined with artificial intelligence technology, big data analysis and deep machine learning, colleges and universities can build smarter and more efficient financial systems. During the period of digital transformation, the financial system of colleges and universities should take into account the level of financial personnel's education and professional skills, the existing system structure and other factors, and build a "RPA+AI" technology model with appropriate participation of human beings, which will not only help colleges and universities to transform the reimbursement business from traditional "paper-based" mode to traditional "paper-based" mode. This model will not only help the university reimbursement business from the traditional "paper-based" mode to the "paperless" mode of smooth transition. Finally, this paper focuses on how to promote the digital transformation of university finance through the effective implementation of paperless reimbursement. Through a series of initiatives, not only to enhance the level of financial management of universities and colleges of intelligence, but also for the future of the financial management system of universities and colleges of construction to provide useful theoretical reference.

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Conflict of Interest

The authors declare no conflict of interest.

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Research on China's “Belt and Road” Project - The Case of Great Stone Industrial Park

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Abstract

This article provides an in-depth study of the implementation and impact of projects under China's Belt and Road Initiative, with a particular focus on the Great Stone Industrial Park project within the China-Belarus Industrial Park as a case study for research and analysis. The research and conclusion of the study, after gaining a comprehensive understanding of the project's progress and its wider impact, is found to be crucial in assessing the effectiveness of China's Belt and Road projects in promoting international economic cooperation. The complexity of the Belt and Road Initiative stems from the multifaceted challenges that such large-scale projects inevitably face, including government regulatory barriers, cultural differences, and external environmental issues. For this reason, we have adopted a mathematical modeling approach to our research, accomplished by combining quantitative data analysis with qualitative case studies. This included scrutinizing official documents, reviewing key stakeholders, and statistically analyzing economic indicators. Our findings suggest that the Monolithic Industrial Park project has significantly contributed to the economic development of the Minsk region by improving infrastructure, attracting foreign investment and creating jobs. However, the challenges identified also highlight the need for strategic planning and cooperative efforts to achieve sustainable success. This study not only contributes to the academic discussion of issues in international economic cooperation, but also provides actionable insights and cases for policymakers and practitioners involved in similar activities.



Full Text Article



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Keywords: Belt and Road Initiative (BRI) [1], Great Stone Industrial Park[2], Economic Development, Sustainable Cooperation

Introduction

2013, the Chinese government launched the Belt and Road Initiative (BRI), a major initiative aimed at facilitating global trade and infrastructure development covering more than 150 countries

with a vast network of land and sea routes ^[3]. At the heart of this ambitious initiative is the establishment of numerous industrial parks and special economic zones to promote economic cooperation and codevelopment. The China-Belarus Great Stone Industrial Park is a key example of such cooperation, symbolizing the partnership between China and Belarus aimed at strengthening industrial capacities and technological exchanges. The project at the Great Stone Industrial Park is a major cooperation project that reflects the complex dynamics of cross-border investment between countries and the strategic significance of the Belt and Road Initiative. By examining the Great Stone Industrial Park project in detail, this study not only enriches the academic discourse on the Belt and Road, but also provides practical insights for stakeholders involved in similar country-to-country cross-border schemes. Ultimately, this study aims to enhance the understanding and exploration of how the grand vision of the Belt and Road can be translated into tangible outcomes.

A study and research on the case of the Belt and Road Initiative Great Stone Industrial Park

1.1 Core issue study of the Great Stone Industrial Park case

While the Belt and Road Initiative has received extensive coverage and international discussion in the international media, there remains a notable gap in scholarship that examines the realities and impacts of specific projects, such as the Great Stone Industrial Park. The research in this article aims to fill this gap by exploring the complexities of the Great Stone Industrial Park project program in order to provide a micro-perspective on the broader Belt and Road Initiative framework. The central research questions are: what are the strategic motives behind the Great Stone Industrial Park project? How does it affect the Chinese and Belarusian economies? What are the potential challenges and opportunities it presents?

The Belt and Road Initiative is of great significance in reducing the economic disparities between regions of China and promoting the comprehensive and balanced development of regional economies ^[4]. This study is of great significance. Understanding the Great Stone Industrial Park project will not only shed light on the operational mechanisms of the Belt and Road Initiative, but also provide insight into the broader economic impact of China's global expansion strategy. Given the high level of global interest in the Belt and Road project, a careful analysis of its constituent projects is critical for policymakers, firms, and scholars alike.

Existing literature on the Belt and Road focuses on macro-level economic and geopolitical impacts, with limited attention to specific case studies. These studies often overlook the details of individual projects, making it impossible to understand their actual outcomes and challenges.

The research in this article attempts to fill this gap by providing an in-depth case study of the Great Stone Industrial Park project. Using a combination of qualitative and quantitative methods, including gathering key stakeholders, analyzing official documents and economic data, the study seeks to reveal the multifaceted impacts of the project. The main objectives are: 1. to identify the strategic motives behind the Great Stone Industrial Park program; 2. to assess its economic impact on China and Belarus; and 3. to assess the challenges and opportunities it presents in the context of the Belt and Road.

Great Stone Industrial Park Case Study Methodology

2.1 Design Thinking Approach for the Great Stone Industrial Park Case Study

This article examines the impact of China's Belt and Road project on the Great Stone Industrial Park project through a study using a mathematical modeling approach. The design of the study incorporates reviewed documentary data and quantitative data on economic and employment indicators to provide a comprehensive analysis of the economic and employment relationship.

2.2.1 Great Stone Industrial Park Quantitative Data:

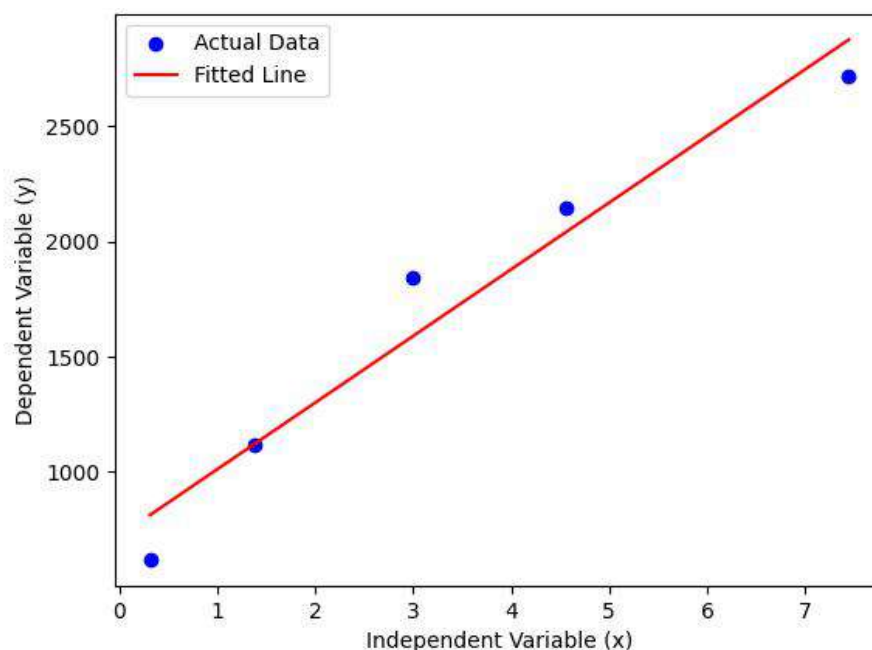
The economic indicators reviewed relevant documents such as project proposals, policy papers and annual reports to gather background information, and data on trade volumes, FDI and employment rates were obtained from official statistical databases. Project Employment Indicators were obtained from project management reports, including project completion time, cost overruns, and return on investment.

2.2.2 Mathematical Modeling of Great Stone Industrial Parks

A mathematical model was developed to quantify the impact of the Great Stone Industrial Park program on the local population:

1. Economic and Employment Growth Model

This article examines the impact of China's Belt and Road project on the Great Stone Industrial Park project through a study using a mathematical modeling approach. The design of the study incorporates reviewed documentary data and quantitative data on economic and employment indicators to provide a comprehensive analysis of the economic and employment relationship.



(Figure 1) Mathematical Model of Economic and Employment Growth

This study provides important insights into the economic and employment impacts of this strategic cooperation in the context of China's Belt and Road Initiative program, and in particular in the context of the Great Stone Industrial Park project cooperation program within the China-Belarus Industrial Park. Using the economic and employment growth model (Figure 1), it can be analyzed that the total number of employees of enterprises in the park is positively correlated with the industrial output value of the resident enterprises in the park, and the greater the industrial output value of the resident enterprises in the park, the greater the total number of employees of the enterprises in the park. The Great Stone Industrial Park project has brought jobs to the Belarusian region and boosted the region's economic development.

Exploring the economic impact of the megalithic industrial park case

3.1 Local Economic Impact of the Monolithic Industry

In order to assess the economic impact of the Great Stone Industrial Park project, various financial indicators were analyzed, including the gross industrial output value of the resident enterprises in the park, and the overall net profit of the park enterprises. The economic benefits observed over a five-year period are summarized in (Table 1).

particular year	Gross industrial output of enterprises resident in the park/billion rubles (BYN)	Overall net profit of enterprises in the park / million rubles (BYN)
2019	0.316	-22.8
2020	1.388	-43.1
2021	2.992	1390
2022	4.561	3410
2023	7.445	6920

(Table 1) Economic Impact of the Great Stone Industrial Park Project (2019-2023)

(Table 1) The data show that the gross industrial output value of the park residents' enterprises in the Great Stone Industrial Park has continued to expand and the overall net profit of the park's enterprises has turned from negative to positive in 2019-2023, indicating that the development of the Great Stone Industrial Park has explored the right goals, and that the Gross Industrial Output Value of the park residents' enterprises in the project's Great Stone Industrial Park and the overall net profit of the park's enterprises have continued to grow, highlighting the project's positive economic contribution to both China and Belarus is emphasized. The cooperation in the Great Stone Industrial Park is beneficial for both economies, and China-Belarus cooperation is a win-win situation.

3.2 Impact of the number of enterprises in the Great Stone Industrial Park on the employed population

The Great Stone Industrial Park has brought economic development to the local community, as well as jobs. The impact of the total number of Great Stone Industrial Park on the total number of

Great Stone Industrial Park was objectively assessed by reviewing the official website of Monolithic Industrial and collecting relevant documents, focusing on the impact of the project on the development of the local community. The enterprises in Great Stone Industrial Park have provided jobs to the area, while the influence of Great Stone Industrial Park has been increasing, and more and more enterprises have moved into Great Stone Industrial Park. (Table 2) summarizes the results of the survey on job creation by the companies that have moved into the Great Stone Industrial Park.

An increase in the number of businesses in Great Stone Industrial Park is usually a direct result of an increase in the number of jobs. Every business needs to hire employees in order to operate, so an increase in the number of businesses will directly provide more jobs. Business growth also has indirect employment effects. For example, new businesses may require external services such as logistics, catering, security, etc., thus generating new jobs around the industrial park. With the increase in jobs, employees' income increases, which will raise the overall consumption level of the industrial park and its surrounding areas, which in turn may attract more service sector firms to enter and create more jobs. An increase in the number of firms in the industrial park may facilitate the exchange and spillover of skills and knowledge, which will not only raise the skill level of existing employees, but also attract more labor with specialized skills, further increasing the number and quality of jobs.

particular year	Total number of employees of enterprises in the park/person	Total number of enterprises in the park/unit
2019	617	60
2020	1115	68
2021	1843	85
2022	2149	100
2023	2719	120

(Table 2) Assessment of the impact of the Great Stone Industrial Park on the employed population (2019-2023) years

(Figure 2) The data show that the influence of the Great Stone Industrial Park has continued to become larger in the region from 2019-2023, the number of enterprises in the Great Stone Industrial Park has been increasing, and the employment population in the Great Stone Industrial Park has been increasing, which has positively contributed to the development of the local community's economy, indicating that the project has a good regional influence. It reflects the correctness of the cooperation of the Great Stone Industrial Park project, as well as the fact that the Belt and Road has promoted the economic development of the partner countries.

The increase in the number of enterprises in Great Stone Industrial Park has a complex and far-reaching impact on jobs, which requires comprehensive consideration of a number of factors such as direct and indirect effects, economic diversification, skill level, and policy environment. By analyzing these factors in depth, the specific impact of the growth in the number of enterprises on jobs can be better understood.

Future Development of Great Stone Industrial Park

4.1 Exploring the future development of the Great Stone Industrial Park and its direction

This study delves into the complexities of China's Belt and Road Initiative, with a special focus on the Great Stone Industrial Park project within the China-Belarus Industrial Park as a case study. The main goal is to assess the effectiveness and impact of the project in terms of economy and employment.

The study utilized a multifaceted approach, combining qualitative and quantitative methods. Data collection included extensive interviews with key stakeholders, supplemented by statistical analysis of economic indicators and project performance indicators. The findings reveal several key insights:

1. Economic growth: The Great Stone Industrial Park project has made a significant contribution to the local economy, increasing employment opportunities and facilitating trade between China and Belarus.
2. Infrastructure development: The project has significantly improved the local infrastructure, benefiting not only Great Stone Industrial Park but also the surrounding area.
3. Socio-environmental impact: The initiative has strengthened diplomatic relations between the two countries, highlighting the potential of the One Belt, One Road project to promote international cooperation and mutual trust.

4.2 Broader Impacts of Great Stone Industrial Parks

Rector of Paik University, Andrei Dmitrievich Karol:

“China-Belarus relations are developing rapidly in all spheres, and agreements signed with Chinese partners are moving forward methodically like clockwork. The Great Stone Industrial Park is an example of this, where a large number of talented people are now needed.”

The Great Stone Industrial Park is a modern international eco-city, where the companies in the park produce innovative products with high technology, competitiveness and high export potential. Created on the initiative of the heads of state of the two countries, it is the largest Chinese economic and trade cooperation zone outside China.

It has been rapidly developed within the framework of agreements signed between the two governments. All companies can become a member of the park, regardless of the country from which their capital comes, and the Jusco Industrial Park creates a favorable investment environment for them.

There is a China-Belarus Innovation and Cooperation Center for Industrialization of Scientific and Technological Achievements in the Great Stone Industrial Park. Great Stone Industrial Park is known as a pearl and landmark project on the Silk Road Economic Belt^[5].

In September 2019, the Great Stone Industrial Park was awarded the “New Silk Road Finance Award 2019” in Singapore by the largest and most influential magazine *Asiamoney*, and was nominated for the “Best Project of the Belt and Road Initiative in Central and Eastern Europe”. According to the authoritative international publication *Financial Times*, in October 2020 Great Stone Industrial Park was recognized as the Best Special Economic Zone of 2020 within the framework of the Belt and Road Initiative^[6]. The development company is committed to building the park into an “internationalized industrial park and an ecological industrial city”, and the park will be a high-quality industrial platform for investment and operation by enterprises from all over

the world by realizing the full range of services, policies, legal system, information, capital, talents, and convenient life ^[7]. The study also emphasizes the broader impact of the Belt and Road in shaping global trade dynamics and regional development strategies. The success of the Great Stone Industrial Park project demonstrates the feasibility of cross-border cooperation and highlights the transformative impact of strategic infrastructure investment.

Conclusion

The construction of the “Belt and Road” is of great significance to the development of both China and the countries along the route, and it is incumbent upon China, as the initiator of the initiative, to steadily promote the construction of the “Belt and Road”^[8]. The significance of the research in this article lies in the comprehensive assessment of the micro elements within the Belt and Road framework. By examining the Great Stone Industrial Park project, this article provides empirical evidence of the tangible benefits that such initiatives can generate. These findings are particularly important for policymakers, investors and international stakeholders who wish to understand the actual impacts and potential rewards of participating in the Belt and Road Initiative. This study not only enriches the academic discourse on the Belt and Road, but also provides actionable insights for stakeholders involved in similar projects. The case of the Great Stone Industrial Park exemplifies the synergistic benefits of international cooperation and reinforces the role of the Belt and Road as a catalyst for economic growth and geopolitical harmony. Future research could further explore other Belt and Road projects to gain a fuller understanding of their global impact.

At present, the “Belt and Road” has become one of China's core development strategies^[9]. The importance of the research in this paper lies in the comprehensive assessment of the micro elements within the Belt and Road framework. By examining the Great Stone Industrial Park project, this paper provides empirical evidence of the tangible benefits that such initiatives can generate. These findings are particularly important for policymakers, investors and international stakeholders who wish to understand the actual impacts and potential returns of participating in Belt and Road initiatives. This study not only enriches the academic debate on the Belt and Road, but also provides actionable insights for stakeholders involved in similar projects. The case of the Great Stone Industrial Park highlights the synergistic benefits of international cooperation and reinforces the role of the Belt and Road as a catalyst for economic growth and geopolitical harmony. Future research could further explore other Belt and Road projects to gain a more comprehensive understanding of their global impact.

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All contributions of the third parties can be acknowledged in this section.

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Legislative Responses to the Younger Age Trend of Minors' Civil Infringements

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Abstract

This paper focuses on the remarkable social phenomenon of the younger age trend of minors' infringement behaviors for research. Firstly, it presents the current situation of this phenomenon in terms of quantity, type, and degree of harm through data statistics and case compilations, and conducts in-depth analyses of the characteristics of the actors and types of infringements. It also explores the reasons from multiple aspects such as family, school education, social environment, and the psychological and physiological development of minors themselves. From the perspective of comparative law, it elaborates in detail on the models and experiences of the United States, Germany, Japan and other countries in terms of the concepts, principles, liability determination and compensation mechanisms in the legislation of minors' infringements. It combs through the currently relevant laws and regulations in China and analyzes the existing problems such as the ambiguous standards for determining liability capacity, the imperfect provisions on guardians' liability, and the unsound compensation mechanism. Furthermore, it puts forward suggestions that China should construct a liability capacity determination system integrating multiple factors, improve the guardians' liability system and create a diversified compensation mechanism, aiming to perfect the legal regulation system of minors' infringements in China, effectively respond to the challenges of younger age infringements, balance the interests of all parties, promote social harmony and stability as well as the healthy growth of minors, and provide theoretical and practical references for the construction of the rule of law for minors in China.



Full Text Article



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Keywords: Minors; Civil; Infringement; Younger Age Trend; Legislation

Introduction

Currently, the infringement behaviors of minors have shown a significant trend of younger age (S. Tejaswi et al., 2020). Relevant news reports have pointed out that younger minors have engaged in physical infringement behaviors by fighting with classmates over trifles on campus; younger minors have deliberately damaged public facilities in the community, causing damage to public resources

and endangering the safety of other residents' use (Colleen Sbeglia et al.,2023). In addition, studies have shown that younger minors have caused trauma to the physical and mental health of others through means such as verbal insults, isolation, and even violence (A. Clarke et al.,2020).

The trend of younger age in infringement behaviors has caused negative impacts in many aspects. From the perspective of the victims, their legitimate rights and interests (whether it is the right to physical health or the right to mental tranquility) are directly violated, which may lead to psychological problems such as fear and inferiority complex, affecting their normal study, life and social interactions (Ana M Nascimento et al., 2022). From the perspective of social order, the increase in infringement behaviors by minors disrupts the normal order of social life, undermines the stability of the social environment, and thus increases the cost of social governance (Herbert Rodrigues et al., 2020). From the perspective of the infringers, getting involved in infringement disputes too early is not conducive to the cultivation of their good moral character and behavioral norms, hindering their growth and education on a healthy track, and thus affecting their future life development (M. Tomasello, 2018).

In terms of using legislation to restrain the younger age trend of minors' civil infringements, many countries have conducted relevant research. At the level of comparative law, the United States focuses on constructing a legal framework that combines the principle of fault liability and the principle of equity, emphasizing that individual differences should be fully considered when determining the liability of minors for infringements (H. Najafi, 2020). In addition, it disperses the risks of infringement compensation by improving the insurance system. It can be seen that relevant research not only delves into how to protect the rights and interests of victims but also takes into account the growth environment and development potential of minors.

Legal research in Germany centers on constructing a rigorous legal system by dividing the liability capacity of minors according to different age stages (Yevgeny P. Kim et al., 2018). In addition, it makes detailed provisions on the supplementary liability of guardians and conducts research on how to ensure the rigor of legal logic and the rationality of liability distribution.

Japan combines multiple concepts. Relevant research advocates flexible standards for liability determination and attaches great importance to the application of mediation and conciliation mechanisms in handling disputes over minors' infringements (Yoshihiro Takatori et al., 2023). In addition, it provides guarantees for victims through the fund system, focusing on the effective operation of the legal system under the comprehensive social governance model.

In China, some studies have sorted out the laws and regulations related to minors' infringements and pointed out that the current standards for determining liability capacity are single, the provisions on guardians' liability are not perfect enough, and moreover, the compensation mechanism is not sound (Shizhou Wang, 2023). Based on this, some scholars have proposed drawing on advanced overseas experience to discuss the construction of a diversified liability capacity determination system that conforms to China's situation. They emphasize refining the guardians' liability system, strengthening the insurance system, and improving the social rescue system, so as to establish a diversified compensation mechanism.

The above studies indicate that it is necessary to restrain minors' infringement behaviors through legislation. As the foundation of social order and behavioral norms, the law can clarify the boundaries of minors' infringement behaviors, provide effective relief channels for victims, and

form an effective deterrent against infringement behaviors (Astrid Sulistya Azahra et al.,2023). And the comparative law study has an inestimable value in this process. In-depth research on the experiences of different countries (regions) in the legislation of minors' infringements can provide references for China's legislation and help China build a more perfect legal system of infringements to address relevant social problems.

Methodology

Literature Research Method. This paper collects literature materials such as journal papers, dissertations, and research reports on minors' infringement behaviors and legislation in China and other countries. It combs through the literature on the legislative research related to minors' infringements in different countries (regions) to understand the development context of relevant theories and the evolution process of legislation. For example, this paper sorts out the research results of the United States on the determination of minors' infringement liability and the insurance system, the legal research of Germany on the division of minors' liability capacity, and the literature of Japan on the multiple mediation and compensation mechanisms. In addition, this paper systematically organizes and analyzes the research of Chinese scholars on the current situation of minors' infringement legislation, problem statements, and suggestions for improvement. By sorting out the existing cutting-edge research, this paper establishes a solid theoretical foundation, clarifies the research direction and key points, so as to avoid repetitive research findings.

Questionnaire Survey Method. This paper widely collects representative cases of minors' infringements in China and other countries, including materials of different types of cases such as campus bullying, property infringements, and personal injuries. In-depth analyses of these cases are conducted from multiple perspectives, such as the basic facts, the background of the occurrence of infringement behaviors, the characteristics of the parties (age, family background, educational background, etc.), and the application of laws. Through the analysis of these cases, the complexity and diversity of the phenomenon of the younger age trend of minors' infringements are presented intuitively, and the difficulties and deficiencies of the existing legislation in practical application are deeply explored, thus providing a practical basis for putting forward targeted suggestions for legislative improvement.

Comparative Research Method. This paper conducts a systematic comparative study on the legislative systems and practical experiences of minors' infringements in multiple countries (regions). Detailed comparative analyses are carried out from core aspects such as legislative concepts, standards for determining liability capacity, guardians' liability systems, and compensation mechanisms. For example, a comparative analysis is made between the fault liability system supplemented by the principle of equity in the United States and the rigorous liability capacity determination model based on age division in Germany to identify the different trade-offs between fairness and efficiency in handling cases of minors' infringements. In addition, this paper analyzes the advantages of Japan's multiple mediation and conciliation mechanisms in reducing the costs of handling infringement disputes and conducts a comparative study with the litigation-dominated models in other countries. Through this comparative research, this paper summarizes the advantages and disadvantages as well as the applicable conditions of different legislative models.

Considering China's social background, it screens out effective experiences that can be referred to, providing comprehensive ideas for constructing a scientific and reasonable legal system for minors' infringements in China.

Result

Current Situation

Through the statistical analysis of relevant data in recent years, this paper has found that the trend of younger age in minors' infringement behaviors has become increasingly evident. In terms of the number of cases, taking China as an example, the data provided by the Supreme People's Court shows that in the past three years, the number of illegal acts by minors has generally been on the rise (M. Brzycki, 2023). Among them, the growth rate of the number of infringement cases involving younger minors (aged 6-12) is relatively prominent, and their proportion in civil infringement cases has increased. In terms of the types of infringements, the infringement behaviors cover multiple fields. In campus infringement cases, personal infringement behaviors such as mutual fights and verbal insults among classmates often occur. In community infringement cases, property infringement behaviors such as deliberately destroying public and private property often occur (Juan Del Toro et al., 2023). In addition, with the development of the Internet, the number of online infringement cases has increased dramatically, among which cases such as cyberbullying and the spread of harmful information caused by younger minors occur frequently. In 2023, the procuratorial organs in China accepted a total of 7,769 cases of supporting prosecutions involving minors. After review, 6,936 cases were supported for prosecution, mainly concentrating on types such as marriage and family disputes, inheritance disputes, disputes over personality rights, disputes over infringement liability, and cases of guardianship rights. Combining with case handling, the procuratorial organs issued 57,000 'Supervisory Guardianship Orders' to the guardians of the minors involved in the cases.

In terms of the degree of harm, the consequences of infringements caused by younger minors are also extremely serious. For the purpose of researching the current situation of minors' civil infringements, a total of 300 questionnaires were distributed within China in this study. The survey shows that it is quite common for the personal infringement behaviors of younger minors to cause physical injuries to the victims, requiring medical treatment. Some severe cases have even led to permanent physical disabilities or psychological traumas for the victims (such as suffering from mental illnesses like depression due to long-term exposure to campus bullying). In terms of property infringements, the infringement behaviors of minors have brought direct losses to personal or public properties (such as community public facilities), resulting in high repair costs. Regarding online infringement behaviors, due to the rapidity and extensiveness of network dissemination, they have caused great damage to the social reputations of the victims. Victims often face various pressures from Internet public opinion, and the mental harm is difficult to assess. There have even been cases where victims committed suicide due to being unable to bear the cyberbullying.

Characteristics

Age Characteristics of the Perpetrators

The younger minors are mainly concentrated in the age range of 6-12 years old. Among them, for the 6-8-year-old younger minors, their cognitive abilities are in the initial stage of development, and they lack a clear understanding of the consequences of their actions. At this stage, minors show strong curiosity and imitativeness in their psychological characteristics, and their ability to control their behaviors is relatively weak (Claudia M. Roebbers, 2022). Their infringement behaviors are often driven by instinctive impulses (such as directly snatching an interesting toy when they see it, or attacking their peers by imitating violent behaviors on TV, etc.). Their behaviors are obviously blind, and there is rarely any prior planning.

As for the 9-12-year-old minors, their cognitive abilities have improved, but their performance is still not mature enough. They have self-awareness and social needs, and they may commit infringement behaviors due to factors such as peer pressure and the need for attention in their psychology (Katie N. Paulich et al., 2021). Compared with the 6-8-year-old minor group, their infringement behaviors may carry a certain degree of planning, but the overall degree of planning is still relatively low. For example, in cases of campus bullying, 9-12-year-old minors may plan to isolate an individual or carry out minor violent behaviors against an individual because of jealousy or the desire to highlight their status in the group. However, due to their lack of legal awareness, they often do not consider the consequences of their actions.

Family Background and Educational Background

This paper has found that family structure has a significant impact on the infringement behaviors of younger minors. Minors in single-parent families are more likely to bully others or be bullied by others. This is due to the lack of family supervision (or protection), which leads to a higher probability of infringement behaviors (Inka Cuesta et al., 2021).

In addition, among the group of rural left-behind minors, as their parents have been working away from home for a long time, the children are raised by their grandparents. Due to the grandparents' overindulgence or negligence in discipline, children lack good education on behavioral norms and are prone to various infringement behaviors.

Furthermore, in terms of family education, the indulgent type of education will cause children to be self-centered. Once they encounter situations that do not meet their own needs in interactions, they will satisfy their needs through infringement behaviors. The neglectful type of education will lead children to be in a state of being ignored for a long time, and they will seek attention through some bad behaviors. The authoritarian type of education will suppress children's personalities, causing them to develop rebellious minds and then carry out infringement behaviors to resist parental authority.

In addition, the level of family education is also closely related to the occurrence of infringement behaviors. Families with a lower level of education lack the ability to conduct moral education and popularize legal knowledge for their children. Therefore, minors have a weaker ability to judge right from wrong (A. Zadorozhna, 2022). In families that do not attach importance to moral education, it is difficult for minors to establish correct values, and they are more likely to carry out infringement behaviors when facing conflicts of interest or emotional impulses.

*Types of Infringement Behaviors**Infringement Behaviors Show a Diversified Trend*

In personal infringement behaviors, in addition to the common behaviors such as beating and verbally abusing others, more concealed means of infringement have emerged. For example, maliciously fabricating facts to report others and giving others insulting nicknames to cause mental harm. Property infringement behaviors have expanded from traditional theft and intentional destruction to using the Internet to obtain others' property. For example, without the knowledge of their parents, the perpetrators use their parents' mobile payment software to make large-scale recharges in games or transfer money to others. In terms of intellectual property rights infringement, the phenomenon that younger minors use others' works without permission to make videos and publicly release them on Internet platforms is gradually increasing. This is mainly because they lack the basic knowledge of intellectual property rights protection and carry out infringement behaviors only for the purpose of having fun or showing themselves. Online infringement also includes cyber-violence, which not only includes verbal abuse, but also develops into means such as malicious video-editing and exposing others' private information to attack the victims (Wanda Teays, 2019). In addition, the scope of spreading harmful information has also expanded from text information to multimedia information such as pictures and videos containing pornographic and violent content.

Infringement Behaviors are Closely Integrated with Emerging Technologies

The development of information technology has led to a deep integration of minors' infringement behaviors with new technologies. In the virtual online environment, taking advantage of the anonymity and convenience of the Internet, they can more easily carry out infringement behaviors and are difficult to be detected in a timely manner. For example, creating virtual accounts on social networking platforms to slander and maliciously attack others. Due to the virtual nature of account information, it is often difficult for the victims to identify the real identities of the infringers, resulting in the infringement behaviors being difficult to be stopped in a timely manner.

In addition, the rapidity and extensiveness of network dissemination magnify the consequences of infringement infinitely. Insulting remarks or bad videos posted on the Internet may be massively forwarded and spread within a short period of time, causing the victims to suffer extensive public opinion pressure and damage to their social reputations in schools, communities and even the entire online social circle. Such mental harm may accompany the victims for a long time and even affect their development throughout their lives.

Analysis and Discussion*Factor**Family Factors*

The family, as the primary environment for the growth of minors, plays a fundamental role in shaping their behavior patterns and values. Negligence in parental guardianship is one of the key factors contributing to the younger age trend of minors' infringement behaviors. In a certain

property infringement case, the parents were occupied with work for a long time and failed to supervise the daily behaviors of their 7-year-old child. Without necessary guidance, the child deliberately damaged the vehicles of other residents in the community on multiple occasions. Empirical research data shows that in the survey of the above 300 cases of minors' infringement behaviors, about 30% of the cases involved a lack of parental guardianship.

In addition, whether the family relationship is harmonious is also one of the important influencing factors. In a certain personal infringement case, the family relationship of the perpetrator was not harmonious. The parents often quarreled and even resorted to physical violence, creating a tense and oppressive family atmosphere. As a result, their 11-year-old child gradually became withdrawn and irritable and often had physical conflicts with classmates at school, engaging in assault behaviors. The above survey also indicates that family conflicts can lead to an approximately 20% higher incidence rate of minors' infringement behaviors compared to ordinary families.

Moreover, the family's economic situation and social status also have a certain impact. Families with financial difficulties may, due to a lack of resources, be unable to provide their children with good education and rich social activities. Minors may commit infringement behaviors such as property encroachment due to reasons such as inferiority complex or a craving for material things. In families with high social status, minors may exhibit overbearing behaviors and violate the rights and interests of others in interpersonal interactions due to excessive indulgence or a sense of privilege.

School Education Factors

The school education system shoulders important responsibilities in the growth process of minors, but currently, there are deficiencies in many aspects. In terms of moral education, the curriculum design often lacks systematicness and coherence. Most of it consists of scattered moral courses, and the teaching content is outdated, lacking up-to-date cases and vivid teaching forms. It was found in the survey that its moral education courses are still mainly based on traditional textbook lecturing, with low student participation, making it difficult for students to internalize moral concepts into their own behavioral norms.

Regarding legal education, the content is too theoretical and abstract, divorced from the actualities of students' daily lives. After learning, students are unable to accurately judge the legal consequences of their own behaviors when facing real infringement situations.

In terms of mental health education, there are widespread problems of insufficient attention and lagging intervention measures in schools. Many schools lack professional mental health teachers, and psychological counseling courses exist in name only. Against this background, when students face problems such as learning pressure and contradictions in peer relationships, they lack effective emotion management and conflict resolution abilities, which easily lead to infringement behaviors. For example, after being ridiculed by classmates due to unsatisfactory exam results, some students may vent their emotions by verbally abusing or even assaulting the other party.

Social Environment Factors

The social environment is exerting an increasingly significant impact on the behaviors of younger minors (Lucas Molleman et al., 2021). Unhealthy cultural works are flooding the market, and scenes of infringement behaviors in violent films, television shows and online games frequently appear, which are highly likely to trigger the imitation of minors. For example, popular online games often include virtual scenes such as fighting and robbing. Some younger players gradually blur the boundaries between the virtual and the real during the game process, and also attempt to carry out similar violent behaviors in real life.

The rapid development of social media has brought about the problems of information overload and confusion of values. The bad values spread by various Internet celebrities and self-media, such as the pursuit of material enjoyment and the disregard for the rights and interests of others, are eroding the cognition of minors. The survey found that about 20% of the popular videos are spreading bad values. The large number of views and likes of these videos makes the younger minors who watch them vulnerable to being misled.

The excessive consumerism tendency in society also has a negative impact on minors. Commercial advertisements are ubiquitous, constantly instilling the idea of material supremacy into minors. Some younger minors may resort to property infringement behaviors such as theft and fraud to obtain the desired items since they cannot satisfy their material desires through normal channels.

Individual Factors

According to child psychology and adolescent development theories, younger minors have unique characteristics during their psychological and physiological development stages, which are closely related to the younger age trend of infringement behaviors (Elena Delgado et al., 2022). In terms of cognitive ability, minors aged 6-12 are still in the process of continuous development, and their understanding of complex social phenomena and behavioral norms is rather limited. In addition, emotional volatility is one of the prominent characteristics of younger minors. They may have intense emotional reactions, such as anger and jealousy, due to trifles, and lack effective emotional regulation abilities. Their weak self-control ability makes it difficult for them to suppress their impulsive behaviors. For example, when faced with temptations, such as seeing others' novel toys or delicious snacks, younger minors may snatch or steal without hesitation. Their strong curiosity combined with a lack of the ability to distinguish right from wrong also easily leads to infringement behaviors. They may, out of curiosity, attempt some dangerous or rights-infringing behaviors, such as randomly spreading unconfirmed information on the Internet, causing damage to others' reputations, without realizing the wrongness of such behaviors themselves.

Comparative Law Analysis

The United States

In terms of legislative concepts and principles, the United States adopts a legislative concept that combines the principle of fault liability with the principle of equity, fully recognizing the particularity of minors in mental development. For example, in some cases where minors cause infringements due to slight negligence, the courts will, in accordance with the principle of equity,

consider the age, family background of the minors and the specific circumstances of the occurrence of the infringement behavior, avoiding simply imposing overly heavy responsibilities on them. This approach not only makes minors realize the inappropriateness of their own behaviors but also ensures that their growth and development will not be affected by excessive economic compensation. The diversification of the judgment standards for the liability capacity of minors in the United States reflects respect for individual differences. The differences in specific judgments among different states reflect the different emphases of each state in balancing the protection of minors' rights and interests and the relief of victims.

In terms of liability determination and compensation mechanisms, the strict provisions on guardians' liability in the United States aim to strengthen the primary responsibility of families in the prevention and handling of minors' infringements. The normal setting of guardians assuming vicarious liability prompts guardians to actively fulfill their guardianship duties and reduce the occurrence of minors' infringement behaviors. However, in some cases, the joint and several liability of minors and guardians is recognized. For example, when minors have a certain degree of autonomous consciousness and economic sources and deliberately commit infringement behaviors, this provision not only emphasizes the individual responsibility of minors but also avoids the moral hazard that may arise from guardians assuming full vicarious liability.

The insurance system in the United States plays a crucial role in the compensation for minors' infringements. The extensive coverage of family liability insurance and school liability insurance has greatly dispersed the risk of infringement compensation. In civil compensation cases involving minors' infringements, approximately 70% of the compensation funds come from various insurance payouts. The comprehensive consideration of various factors by the courts when making compensation judgments reflects their judicial orientation of pursuing substantive fairness. Methods such as installment payments and the establishment of compensation trust funds not only ensure that victims can obtain reasonable compensation but also take into account the economic affordability of minors and their families, which is conducive to the stability and harmony of social relations.

Germany

In terms of legislative concepts and principles, Germany's rigorous and systematic legislative concept, which is based on the tradition of the civil law system, provides a solid theoretical foundation for the liability system of minors' infringements. With the primary goal of protecting the legitimate rights and interests of victims, it ensures that victims can receive timely and effective relief after an infringement occurs. At the same time, it also takes into account the educational and growth interests of minors. By integrating educational and corrective elements into the design of the legal system, the infringement incidents become an opportunity for the education of minors. For example, in some regions, the court will require the infringing minors to receive certain legal education courses or community services, and then adjust the compensation liability or penalty measures appropriately according to their performance.

In terms of liability determination and compensation mechanisms, the German regulation that guardians assume supplementary liability has the unique dual functions of education and protection. This approach encourages minors to establish a sense of property management and responsibility

and understand that their behaviors have economic consequences. The intervention of the German social assistance system in the compensation for minors' infringements reflects its social-welfare-oriented liability-sharing mechanism. When victims are unable to obtain full compensation from the infringing minors and their families for various reasons, social assistance institutions provide relief funds according to relevant laws and regulations, which effectively alleviates the economic difficulties of the victims and safeguards social fairness and justice.

Japan

In terms of legislative concepts and principles, Japan adopts a legislative concept that combines the characteristics of the two major legal systems. On the basis of ensuring the clarity and logic of legal provisions, it pays high attention to the actual social effects and the fairness of individual cases. When determining liability, Japanese courts not only consider the age of the child but also carefully examine the child's mental state at that time and the specific circumstances of the occurrence of the behavior, including factors such as the degree of provoking behavior. Through the discretionary power of judges, the proportion of liability of each party is reasonably determined, which enables the infringing children to recognize their mistakes, avoids new contradictions and disputes caused by simple and rigid liability determination, and at the same time guides minors to establish correct behavioral norms and values, and promotes reflection and improvement in the education and management of minors by schools and families.

In terms of liability determination and compensation mechanisms, the Japanese regulation that guardians assume no-fault vicarious liability but can have their liability reduced or exempted under specific conditions reasonably balances the liability relationship between guardians and minors in infringement behaviors. This regulation not only strengthens the daily guardianship duties of guardians but also avoids guardians from bearing excessive economic and psychological burdens due to unforeseen accidents. Japan's emphasis on the application of mediation and conciliation mechanisms and the establishment of a special fund system reflects its comprehensive governance thinking. Meanwhile, the compensation fund for minors' infringements in Japan has played an important role in some complex infringement cases. For example, in a certain online infringement case involving multiple minors, the fund provided timely compensation funds for the victims, and also provided resource support for psychological counseling and educational correction for the infringing minors, promoting the whole society's comprehensive response and proper handling of the problem of minors' infringements, which is helpful for maintaining social harmony and stability.

Suggestion

Current Legislative Situation in China

China has established a system of laws and regulations concerning minors' infringements. Among them, the *Civil Code of the People's Republic of China* has laid the basic framework and clarified the identification principles of the tort liability of persons without civil capacity and persons with limited civil capacity. Different liability-bearing methods are divided according to age, highlighting the consideration of the cognitive development stage of minors. For example, if a minor under the age of eight commits an infringement, generally the guardian shall bear the tort

liability, which reflects the determination that a person without civil capacity lacks the ability of independent judgment and liability-bearing. For a person with limited civil capacity over the age of eight who commits an infringement, the liability-bearing is comprehensively judged according to factors such as the degree of his or her fault, to a certain extent recognizing that minors of this age group have a certain degree of cognitive and judgment abilities.

The *Law of the People's Republic of China on the Protection of Minors* focuses on the aspects of education, protection and infringement prevention. It emphasizes the responsibilities of various entities such as families, schools and society in guiding the behaviors of minors and safeguarding their rights and interests. For example, it requires families to pay attention to moral education and safety education, and schools to carry out legal education courses and mental health counseling, aiming to reduce the occurrence of minors' infringement behaviors from the source.

The *Education Law of the People's Republic of China* indirectly involves the provisions on the prevention and handling of minors' infringement behaviors during their school days in the process of regulating school education and teaching activities, such as the school's management responsibilities for students and the obligation to provide safety education. The *Law of the People's Republic of China on Penalties for Administration of Public Security* stipulates corresponding punishment measures for some infringement behaviors that violate public security management implemented by minors. Although it mainly focuses on the level of public security management, it also has a certain connection with the determination of civil tort liability and plays a certain deterrent role in minors' infringement behaviors while maintaining social order.

However, there are certain problems with the connection among these laws and regulations. In terms of liability determination, there is a lack of a unified and refined coordinating mechanism for the definition and imputation standards of minors' infringement behaviors in different laws. For example, in some campus infringement cases, the provisions of the *Civil Code* and the *Education Law* regarding under what circumstances the school should bear liability and what kind of liability it should bear are not clear enough, resulting in possible ambiguous areas in the application of the law in practice. There are also deficiencies in the connection between infringement prevention and subsequent handling. Although the *Law on the Protection of Minors* emphasizes prevention, there is a lack of close procedural connection between the handling of infringements after prevention failure and laws such as the *Civil Code*, so that the synergy among the various laws cannot be fully exerted when handling specific infringement cases.

Suggestion

Improve the Standards for Determining Liability Capacity

Build a liability-capacity-determination system that integrates multiple factors. Besides age, introduce professional psychological evaluation and behavioral-ability-assessment mechanisms. For example, set up a specialized institution for assessing the capacity of minors. When faced with complex infringement cases, this institution should conduct a comprehensive evaluation of minors' cognitive abilities, psychological maturity, and social-adaptation abilities. The evaluation content can include the understanding level of moral norms and legal knowledge, the ability to control emotions and resolve conflicts, and the decision-making ability in specific situations. Based on the evaluation results, divide the liability capacity of minors into different levels, such as completely

non-labile, limited liability (mild, moderate, severe), and nearly fully liable, and accordingly determine the scope of their tort liability. At the same time, formulate national-level guiding standards for determining the liability capacity of minors, and allow each region to make appropriate adjustments according to local economic, cultural, educational and other actual situations to take into account regional differences and ensure the scientific, accurate and fair determination of liability capacity.

Improve the system of guardians' liability. Clearly define the imputation principle of guardians' liability, with the presumption of fault principle as the main one and the principle of equitable liability as the supplementary one. In specific cases, if a minor commits an infringement, it shall be presumed first that the guardian is at fault. Unless the guardian can provide sufficient evidence to prove that he or she has fulfilled reasonable guardianship duties, such as regularly conducting moral education, safety education and behavior supervision on the minor, and establishing a good family communication mechanism, etc., the guardian shall bear the tort liability. Under special circumstances, such as when the infringement of the minor is caused by force majeure or other unforeseeable and unavoidable reasons, and the guardian has taken necessary preventive measures, the principle of equitable liability shall apply, and the guardian and the victim shall share the losses according to the actual situation.

Refine the ways in which guardians bear liability. In addition to property compensation, add non-property liability-bearing methods. For example, when a minor commits infringement behaviors multiple times, the guardian can be ordered to attend specialized family education training courses and submit learning insights and family behavior improvement plans. Guardians can be required to accompany minors to participate in community services or public-welfare activities to enhance minors' sense of social responsibility and awareness of behavioral norms. For more serious infringement behaviors, certain social public announcements or credit punishments can be imposed on guardians to urge them to better perform their guardianship duties. At the same time, clarify the situations of limitation and exemption of guardians' liability. It is stipulated that when a guardian is in financial difficulties and unable to bear the full compensation liability, he or she can apply for a reduction or exemption of part of the compensation amount according to his or her family's financial situation, but detailed family property certificates and income statements are required. In cases where a guardian's minor is instigated or lured by others to commit infringement behaviors, and the guardian has taken timely measures to stop it but failed, part of the guardian's liability can be exempted, and the focus of liability investigation can be shifted to the instigators and lures.

Build a diversified compensation mechanism. Broaden the channels for compensation fund sources. Encourage financial institutions to develop special insurance products for the risk of minors' infringements, such as comprehensive tort liability insurance for minors, which covers the infringement risk protection in multiple scenarios such as family life, school study and social activities. The government can use policy means such as financial subsidies and tax incentives to reduce the purchase cost of such insurance products and increase the enthusiasm of families and schools for insurance purchase. At the same time, explore the establishment of a special fund for compensation of minors' infringements. The sources of funds can include government appropriations, social donations, corporate sponsorships, and reasonable fines on the families of infringers. The fund is used to provide compensation fund support for infringers from families with

financial difficulties and to provide supplementary compensation for victims when they cannot obtain full compensation.

Perfect the role of the insurance system in the compensation for minors' infringements. Simplify the insurance claim settlement procedures and establish a fast claim settlement channel. For example, it should be stipulated that after receiving an application for compensation for minors' infringements, the insurance company shall complete the preliminary review within the specified working days and complete the claim settlement within a certain period according to the complexity of the case. Formulate unified insurance claim settlement standards for minors' infringements, clarify the scope of insurance liability, compensation limits, exemption clauses and other contents to enhance the transparency and operability of insurance products. Strengthen the supervision of insurance companies to prevent them from shirking their claim settlement responsibilities on various grounds and ensure that the victims can obtain insurance compensation in a timely manner.

Strengthen the support of the social assistance system for the victims of minors' infringements. Formulate assistance policies specifically targeted at the victims of minors' infringements, and set up assistance hotlines and online application platforms to facilitate the victims to apply for assistance in a timely manner. The assistance contents include economic assistance, such as providing medical expense subsidies and living hardship allowances; psychological counseling, with professional psychological counselors providing free psychological treatment and rehabilitation services for the victims; legal assistance, providing the victims with free legal consultations, litigation agency services, etc. Establish a multi-department collaborative assistance work mechanism, with the civil affairs department responsible for the management and distribution of assistance funds, the education department assisting in solving the academic problems of the victims caused by infringements, the judicial department ensuring that the legitimate rights and interests of the victims are safeguarded in legal procedures, and the health department providing medical resource support, etc., forming a comprehensive and multi-level social assistance network to effectively ensure that the victims of minors' infringements can obtain timely and effective assistance after suffering infringements, alleviating their dual difficulties in economy and life, and promoting social fairness, justice, harmony and stability.

Conclusion

The phenomenon of the younger age trend of minors' infringement behaviors has become a problem that cannot be ignored in today's society, having a profound impact on the rights and interests of victims, social order, and the growth of minors themselves. Through an in-depth analysis of the current legislative situation regarding minors' infringements in China, we have revealed the existing problems such as ambiguous standards for determining liability capacity, imperfect regulations on guardians' liability, and incomplete compensation mechanisms. From the perspective of comparative law, the legislative models and practical experiences of countries such as the United States, Germany, and Japan have provided us with diverse perspectives for consideration and useful references.

To construct a scientific and reasonable legal regulatory system for minors' infringements, it is necessary to comprehensively consider various factors. In terms of determining liability capacity, it

is required to break through the limitation of single age division and build a comprehensive assessment system integrating multiple factors. Regarding the system of guardians' liability, the imputation principles should be clearly defined, and the ways of bearing liability as well as the situations of limitation and exemption should be detailed. As for the compensation mechanism, the sources of funds should be expanded, the insurance system should be improved, and the function of social assistance should be strengthened. Only in this way can the effective restraint and proper handling of minors' infringement behaviors be achieved, while safeguarding the legitimate rights and interests of victims and taking into account the healthy growth of minors and the harmonious and stable development of society. In the future, with the development of society and the in-depth progress of legal practice, continuous attention still needs to be paid to the dynamic evolution of the legislation on minors' infringements, continuous exploration and innovation should be carried out, and unremitting efforts should be made for the cause of legal protection of minors to promote the legal system for minors in China to move towards a more perfect and mature direction.

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How to Tell Chinese Red Stories Well from the Perspective of Narrative Rationality-Take The Battle at Lake Changjin as an example

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Abstract

At the 19th National Congress of the Communist Party of China, put forward the communication strategy requirement of "promoting the construction of international communication capacity and telling Chinese stories well". How to tell Chinese stories well and spread Chinese voices well is related to the spread of Chinese traditional culture and red revolutionary culture. From the 35th China Film Golden Rooster Awards, it can be seen that Chinese filmmakers have never chosen to lie down, and are making unremitting efforts on the road of how to tell Chinese stories well. Movies with different forms and themes emerge in endlessly, and their reputation is mixed. The Battle at Lake Changjin, as a red memory theme film jointly directed by Chen Kaige, Tsui Hark and Lin Chaoxian, provides a feasible sample for how Chinese film production can fit the narrative rationality, tell Chinese stories well, spread Chinese culture and build the communication path of Chinese red revolutionary spirit.



Full Text Article



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Keywords: narrative rationality; The Battle at Lake Changjin; Chinese Red Story

Narrative Rationality In Main Melody Movies

Since the 18th National Congress of the Communist Party of China, has repeatedly emphasized the construction of international communication capacity and the construction of foreign discourse system; The report of the 19th National Congress of the Communist Party of China put forward: "To promote the construction of international communication capacity, tell Chinese stories well, show a real, three-dimensional and comprehensive China, and improve the national cultural soft power."^[1] The strategic requirement is to tell Chinese red

stories well through movies and focus on revolutionary traditional culture, we must be accurate and perfect in the selection of red story themes, and grasp the logic and positioning of film audience communication. Only by constantly excavating the conceptual expression and discourse system with Chinese local characteristics, and selecting narrative strategies that are consistent with differentiated communication fields and information adoption habits of overseas audiences in various countries, can we continuously improve the communication effect and living space of China's main melody films.^[2] This paper will analyze *The Battle at Lake Changjin* from the perspective of narrative rationality, and explore the consistency of structure, materials and characters in the film.

People are storytellers, which is an important hypothesis put forward by Fisher when studying narrative paradigm. In the film and television industry, directors become the narrators of movie stories. In Fisher's narrative rationality, the principle of consistency followed has become the method to judge the value of stories. Narrative consistency includes the consistency of narrative structure, that is, whether the structure of film narration is complete or not; The consistency of the narrative material, whether the things told in the story as a whole are consistent with the facts; The consistency of narrative roles, that is, whether the characters in the story are authentic or not.

Using narrative rationality to analyze the main melody film can provide more reliable theoretical support of communication and help film creators find the follow-up creative direction. Except for the relationship between content and form, there is not much substantial difference between the artistic characteristics of film and other forms in communication. The film made by the director should be in line with the popular communication Broadcasting, professional film talents in the audience are even rarer, and more of them are ordinary mass users. Without receiving professional film and television education, it is difficult to evaluate the film in a deeper level besides appreciating the aesthetic style and narrative paradigm of the film. Therefore, it is feasible to analyze the acceptance of films with the "narrative rationality" that fits the public, so as to explore how to "tell Chinese stories well".

Consistency of narrative structure

Hillis Miller, a representative of Yale critics of American structuralism, once put forward: "Narrative is to walk forward along a line, and any narration is to re-express and re-tell something with different 'lines'". This narrative line contains storyline components such as the beginning, middle and end.^[3] In view of the consistency of narrative structure, the film *The Battle at Lake Changjin* has a clear narrative structure, which mainly includes three narrative structures: macro, micro and confrontation.

(1) Macro narrative structure

The macro narrative structure mainly tells the historical review of the War to Resist U.S. Aggression and Aid Korea by the senior leaders of the US military and our country. In this narrative, the film adopts a document display method, and fully restores a true historical story through the deployment and decision-making of the entire war and the final combat process.

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The decision-making process and key lines to resist U.S. aggression and aid Korea all have their sources, and the deployment and implementation of Changjin Lake operations also strictly refer to military history documents.^[4] The macro narrative structure in the film is logical and clear, aiming to reproduce history through video materials and make up for the audience The constructed red memory and the gap in the changing times. At the beginning of the film, our high-level resolution shows the firm principle that we have to fight in order to safeguard national peace, depicts the tough attitude of our leaders in the face of national disasters, and shows the heroic temperament of Mao Peng who are unwilling to give in and struggle hard. Later, the main plot in the works is constantly interspersed between the micro-narrative structures by montage, and is presented in the whole film in a contrasting way. The macro-narrative structure is clear and easy to understand, which fully shapes the lofty image of the leaders in China's revolutionary era.

(2) Micro-narrative structure

The micro-narrative structure mainly focuses on the perspective of the soldiers of the Seventh Company in the War to Resist U.S. Aggression and Aid Korea, and revolves around Wu Wanli, a fledgling soldier who had illusions about the war and tried to be recognized by his brother by killing the enemy in battle. As the youngest brother in Wu Wanli's family, he has been protected by his brother Wu Qianli and his relatives. In the film, Wu Qianli once said, "We have finished the battle we should fight, so you don't have to fight." This perspective of a little person makes it easier for the audience to substitute for the plot, and examining oneself is the fledgling recruit in the film who doesn't know the cruelty of war. With the advancement of micro-narrative structure, after showing the tragic war from Wu Wanli's perspective, the audience better understands that the current peace is hard-won. Wu Wanli's growth and transformation go hand in hand with the cruelty of the war. It is this narrative structure that allows the audience to better understand the hard and difficult life of the volunteer soldiers in those days.

The micro-narrative structure is attached to the emotions of life and death of the soldiers of the Seventh Company, which is very common in the main theme movies in recent years. Telling big stories from the perspective of small people has become the main theme movies of red theme in China at present One of the creative trends, so is Sniper directed by Zhang Yimou. This not only forms a strong contrast with the macro narrative line in structure, but also explains the cruel significance of war for individuals to the audience through a subtle perspective. At the same time, the emotions of the little people in this micro narrative line can also be more recognized by the audience. In a sense, to tell the Chinese red story well, we have to discover the characters from a more acceptable perspective for the whole society.

(3) Confrontation narrative structure

The confrontation narrative structure depicts the image of the U.S. military in the War to Resist U.S. Aggression and Aid Korea, including Commander MacArthur and the "Polar Bear" Corps. Before the war started, MacArthur made malicious words to make the war end before Christmas and let all soldiers go home for Christmas. This declaration was also accepted by American soldiers. American soldiers believed that the Korean War was nothing

more than a small scene in many aggressive wars, and the purpose was to add chips to General MacArthur's presidential campaign. In the narrative of the passage before the head-on confrontation at the Battle of Changjin Lake, the film uses multiple details to create the arrogant, cruel and bloody characters of US military commanders and soldiers, and lays the foundation for the war. The ending of "Great Reversal" sets a distinct metaphorical effect and narrative foreshadowing.

The confrontation narrative line and the macro narrative line have the same function, both of which are to better give way to the micro narrative line and substitute the audience's movie-watching mood. Therefore, in the overall framework of the film, most of the narrative plots are still concentrated in the micro-perspective, and the auxiliary role played by the confrontation narrative line and the macro narrative line has brought great resonance psychology and appeal to the audience. The three narrative structures in *The Battle at Lake Changjin* have distinct primary and secondary, and are clearly organized, which are relatively more in line with the principle of structural consistency in narrative rationality.

Consistency of narrative materials

(1) Authenticity of material consistency

Movies based on the history of the Red Revolution often have a gap with the audience because of the theme. For *The Battle at Lake Changjin*, audiences of different ages, regions and education levels may also have mixed word-of-mouth situations because of historical reasons and their own environmental problems. However, for the audience who is familiar with Chinese history, the war materials shown in the film are basically consistent with their cognition and conception. In historical memory, the battle of "Changjin Lake" to resist U.S. aggression and aid Korea and the national problems reflected can be found in the film. Such groups have a high expectation and sense of identity for the story told in this battle. As a tribute film for the centenary of the founding of China, *The Battle at Lake Changjin*'s box office exceeded 5.695 billion yuan, surpassing *Wolf Warriors II* to become the new box office champion in Chinese film history, setting a new record in Chinese film history and leading the annual global movie box office.[5] At the same time, it also caused waves in overseas markets, which undoubtedly shows that this film is very successful. Syrian accident The authenticity and integrity of the materials in the event ensure the possibility for everyone to know about history through the film, which is highly praised by both overseas and domestic markets.

In the film, when the U.S. military crossed the Yalu River and brought the war to China, our country's leaders quickly organized a counterattack. From the meeting to decide whether to participate in the war, to the specific war implementation arrangements, these events were in the original history. It can be found in history, providing the audience with official confirmation information when choosing whether to believe the storyline of the film. Of course, the reason for the audience's recognition is not only this, but also because of the historical knowledge learned by our movie audiences in the same cultural environment and their lofty admiration for the martyrs in the revolutionary era. The audience will naturally be infected by that indomitable spirit.

Of course, some viewers will be skeptical about the materials shown in the *The Battle at Lake Changjin*, such as the image of the US military shown in the film by the western media and audiences. The reason for their questioning is still that they are hostile to China itself. They cannot accept that their own country's soldiers lost to China and hold different positions and viewpoints. From the perspective of western media, they think that the stories told in *The Battle at Lake Changjin's* films are untrue, and this material is inconsistent with their history books, indirectly denying their hegemonism and aggressive ambition. From this point of view, narrative rationality believes that people should be influenced by culture. Audiences who believe in the consistency of materials have reasons to believe, and it is reasonable to choose not to believe, while real historical events cannot be changed after all.

To tell the Chinese red story well, we must first look positively at historical materials, discover themes from the red memory revolutionary culture, create films on this basis, and build national self-confidence and cultural self-confidence. We must first establish an objective image of China in the hearts of Chinese audiences before we can further move towards overseas markets. *The Battle at Lake Changjin* has undoubtedly done this. While watching the movie, the audience has broken away from the scene described in the movie, not only watching it, but also putting themselves in the environment shown in the movie to understand the suffering of the war years. Thanks to the consistency of the narrative materials of the film, the film has reached a certain aesthetic height, and it is also a great work that shows the heroic image and popularizes the revolutionary spirit in China's war years.

(2) Accuracy of material consistency

The narrative materials in the film not only strictly examine all kinds of authoritative historical materials, but also combine the relevant historical documents to develop, which makes the narrative materials achieve a high degree of consistency. However, there are some problems in the details of the film. For example, the description of the extreme weather conditions in Changjin Lake is far from detailed enough. The famous American writer John Tolan's war history book "*The Long Battle: The Korean War in the Eyes of Americans*" describes: "Chinese soldiers are covered with ice and are still charging tenaciously. Chinese soldiers use lard and cattle and sheep suet to paste their feet to prevent frostbite. But they showed the most incredible courage and willpower in the history of human war. Hundreds of thousands of officers and soldiers trekked through snowfields and glaciers on foot, crossing bullets and flames." [6] In later interviews, many American veterans who participated in the Battle of Changjin Lake to Resist U.S. Aggression and Aid Korea described cruel scenes that were more difficult than those shown in the film. The film was undoubtedly successful in terms of the authenticity of the narrative material, but it was slightly lacking in the accuracy of the material.

Secondly, *The Battle at Lake Changjin's* performance in describing the scale of the war and the difference between the enemy and ourselves is insufficient. It is similar to the movies of *The Battle at Lake Changjin's* cinema fires in previous years, that is, it describes the grand war through a subtle perspective, and most of the themes are selected from small-scale battles in a certain battle. This way of expression is chosen to be implemented in specific historical figures, but the disadvantage is that it cannot reflect large-scale scenes and the complete

framework of the war at that time. Although The Battle at Lake Changjin's ending extends to the subsequent larger scene of battle, because of the film and television It is not reflected in the material, which makes it impossible for the audience to connect the two together, resulting in different degrees of separation when watching movies.

Finally, no matter in terms of the difference in numbers between the enemy and ourselves or the difference in firepower, this sense of disparity in the war has not been well reflected. It is only through Wu Qianli's dictation in the film that "the enemy's strength is several times that of ours in every battle", but it is difficult to describe the accuracy of the number of people in the war only in words.

Narrative role consistency

To tell the Chinese red story well, why should we focus on the heroic image of the revolutionary tradition? Freud believes that the worship of heroes is an important source to promote the spiritual connotation and ideological power among social people. When people are in a real predicament, they need spiritual sustenance and the spiritual inheritance of great and lofty heroes, so that they can establish a perfect personality and confidence in facing difficulties. In recent years, Chinese main melody movies have been pursuing the diversity of characters in stories. As far as the motif of telling Chinese red stories well is concerned, the martyrs in the revolutionary era are the best range of materials. Every hero in The Battle at Lake Changjin has his own unique personality and characteristics, and the narrative role conforms to the image of heroes and martyrs in the revolutionary era. Although not everyone is lofty and great, they all have the typical characteristics of "defending the country".

For example, Wu Wanli in The Battle at Lake Changjin, as a young teenager who doesn't know the sinister, has a role relationship with Wu Qianli's younger brother, and the role story told is also the mental journey of a recruit's growth. The metaphor of the character is suitable for people in peacetime and non-war years. The audience in peacetime, like Wu Wanli, has unrealistic illusions about war, but when they really come into contact with the cruel truth, they have a certain fear. The role of Wu Wanli in the film conforms to the role consistency in narrative rationality, and can form empathy with the audience. In the second half of the film, Wu Wanli gradually integrates into the group portraits of soldiers, which not only means that Wu Wanli, as a recruit, finally experienced the significance of war, but also transformed into a real soldier. At the same time, he also returned his individual heroism to the collective, showing the change from small to big in his narrative role.

Wu Qianli's image as a "company commander" runs through the whole film, and only in the clip of going home, he shows the role attribute of "elder brother". As a typical character, he plays a leading role in the whole film in the continuous advancement of the narrative. In the narrative role, the image of "Lei Gong", like Wu Wanli, shows the tolerance of the collective of "Qilian" for the individual "Wu Wanli" in the superficial narrative, and in the internal narrative, it is a metaphor for the expectation and affirmation of the martyrs in the revolutionary era for the younger generation.

Finally, the consistency of characters also includes whether the image of the actor is consistent with the image in the story he is performing. Obviously, Jason Wu, Hu Jun and others are actors who have appeared in Chinese main melody movies many times, and their heroic roles are more easily accepted by the audience. Jason Wu, in particular, has accumulated a lot of audience popularity in the early Wolf Warriors series of movies, and his positive role has added a lot of persuasiveness and role effect to *The Battle at Lake Changjin*. Jackson Yee, who plays Wu Wanli in the film, belongs to the new generation of actors, but he also fully deduces the psychological changes of a newcomer to a veteran with his own acting skills and role understanding, which provides a guarantee for the consistency of roles in the story narrative.

Conclusion

The Battle of Changjin Lake and even the whole war to resist U.S. aggression and aid Korea have different significances for different countries. It is a civil war that the Korean nation can't bear to look back on. It is the war that "no one wants to remember and understand again" in the United States^[7], but for China, it is "the manifesto of the Chinese people standing up and standing in the east of the world, and it is the manifesto of the Chinese people. An important milestone for the great rejuvenation of the nation"^[8]. The main melody film shows history with the feelings of Chinese sons and daughters' home and country, rising from the individual to the collective, and from a small perspective to a big man. From the perspective of aesthetic value, it is highly in line with the communication effect of narrative rationality. *The Battle at Lake Changjin* can also be regarded as a model for the film industry to closely follow General Secretary Xi's teaching of "telling Chinese stories well" in the new era. It has established a tenacious, unyielding and hard-working heroic image for the story of China's red revolution, and translated the difficulties of the Battle of Changjin Lake. It is vividly reflected and portrays historical heroes into reasonable and well-founded figures.

As a tribute film for the centenary of the founding of the Party, *The Battle at Lake Changjin* broke the shackles of traditional war films and provided an excellent template for subsequent film creators. Correspondingly, the red theme during the revolutionary struggle still has a broad space for development, but it is necessary to construct works that are more in line with our national image and narrative rational paradigm based on the standpoint of "telling Chinese stories well". We should have the courage to face history directly to complete the narration of history, take the excellent red revolutionary culture as our confidence, stick to the historical position, and explore more artistic and narrative film works. Drawing lessons from the narrative framework of a series of excellent main melody films such as *The Battle at Lake Changjin*, we will constantly excavate and construct the narrative ideas of Chinese revolutionary martyrs, spread the spirit of patriotism and nationalism to win wide cultural recognition and recognition, establish an international image belonging to China, and constantly improve the communication power of Chinese stories.

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Conflict of Interest

The authors declare no conflict of interest.

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The Aesthetics of Yuan Mei's Poem 'Moss'

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Abstract

Yuan Mei (袁枚), a poet and theorist of poetry during the Qianjia period of the Qing Dynasty, was once an official, but later resigned from his post to live in the Sui-Yuan Garden in Xiaocangshan, Nanjing. His poems cover a wide range of subjects, and his use of metaphors is very distinctive. Because he advocated the poetic ideas of "spirituality" and "temperament", his unique ideas promoted the development of poetry in the middle of the Qing Dynasty, and had far-reaching influence on the poetry world at that time. This paper takes Yuan Mei as the object of study, and discusses his poem Moss from the aesthetic ideas of nature, idyll, and the beauty of nature and spirit.



Full Text Article



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Keywords: moss, nature, idyllic, sexuality, aesthetics

Introduction

Yuan Mei (1716-1798) was a representative of the "spiritual poetry" school in the Qing Dynasty. After he retired due to his unsuccessful career, he created a large number of poems and poems, and renamed the house he purchased "Suiyuan", which means "follow your heart". He bought a house and renamed it "Suiyuan", which means "follow your heart", and called himself "Suiyuan Elder". In his book "Poems from Suiyuan", he said, "From the 300 Psalms to the present day, poems are passed down by the spirit of the nature of those who are not related to the stacks." In short, it means that all the poems passed down from the 300 Psalms of the Book of Psalms to the present day are expressive of the spirit of nature, not shallow and general poetic theories. Therefore, "spiritual poetry" mainly expresses the poet's personality and truly reflects human emotions, i.e., the true nature. The beauty of Yuan Mei's poetry lies in its naturalness, and the small poems he created are characterised by their beautiful form, small selection of materials, novel ideas, real emotions, dynamic language, and attention to the observation of details. China has an old saying called "all things quietly observe are self-acquired", appreciation of art through the quiet observation into the realm of aesthetic interest, depends on the nourishment of culture and art, this paper through the Yuan Mei poem "moss" quietly observe all things, to understand the rhyme and mood in the verses,

all thanks to the fun from nature, feel the beauty of life, advocate simplicity, serenity, The following analyses the value of its related artistic aesthetics and discusses the influence of poetry on aesthetics.

1. Interpretation of the natural beauty of Moss

Natural beauty is the most beautiful thing on earth, impregnated with aesthetic meaning, conveying our aspiration - the harmony and unity of man and nature. Yuan Mei, who valued "spirit" and "emotion" in poetry, believed that poetry should be closely related to life, and advocated natural, fresh, easy and fluent poetry from the aspect of artistic expression, just as the content of this poem "Moss":

The sun doesn't go anywhere, but youth comes at the right time.

Moss flowers are as small as rice, but they also bloom like peonies.

Moss--Qing Yuan Mei

This is a poem with a picture in the poem, named "Moss", in which the natural objects such as sun, rice and peony are simple and unadorned, and the small moss flower, as tiny as rice, contains a powerful force, implying that even if it is as tiny as moss, it should bloom like peony, which can be interpreted carefully to discover the poetic ideas contained in it. A careful reading of the poem will reveal the underlying poetic ideas, giving the poem a sense of picture.

The poem seems to be short, each word is not necessarily remote, but everywhere shows the treatment of the finishing touch, the first line of the "day" and "youth" instantly creates a scene of time, at this time the poet has reached the realm of forgetting his behind, the heart of heaven and earth, that is, Zhuang Zi said: "the essence of the Way, the darkness, the darkness, the darkness, the darkness, the darkness, the darkness, the darkness, the darkness, the darkness. That is, Zhuang Zi said the "big bright" state: "to the essence of the Tao, the fair and meditative, to the extreme of the Tao, faint and silent, no sight, no hearing, holding the spirit to quiet, the shape will be self-correct Be careful of your inner self, close your outer self, much knowledge is a failure, I will attempt for you to be on top of the great brightness" (Zhuangzi - Zaiyu). In such a state of mind, the "moss flowers" in the second line locates the tone of the whole poem in the seclusion from the mundane, borrowing the moss flowers to shape a person who seems to be unappetisingly clear and elegant, spiritual and wonderful. The poem cleverly employs the technique of highlighting key objects step by step, first highlighting the harsh environment in which the plant grows, creating an emotional connection with the reader, and at the same time supplementing it with a hint of ambiguity to render the level of the whole scene. The whole poem is serene and secluded, stripped down and condensed, with a profound meaning. Comparing the moss flower with peony, in this quiet and faraway alley, even though only the poet is independent and "forgetting things and self" is the main subject, there is also the empathy of "seeing the mountain is not a mountain", which tells the world that even if they are in the adversity, they have to give themselves a kind of open-minded outlook that is not inferior to the peony. This is to tell the world that even in adversity, one should give oneself an open-minded view that is not inferior to the peony.

The Analects of Confucius says: "Do not be afraid of not having your own place in the world, but seek to become a person of talent and virtue worthy of being known." The translation is: "Do not be afraid of not having your own position in the world, but seek your own way of establishing yourself

in the world; do not be afraid of not being known by others, but only seek to be known as a person of talent and virtue". Yuan Mei's poem was composed in a scene, and then the scene was blended with the scene, so he borrowed things as a metaphor for his will, and when he read the poem, he entered into the poem, and from the "form" in the poem, he led to the "God" behind it, i.e., the form and the God are both complete and the rhyme is vivid. He is in pursuit of independence and freedom of spirit, even if the moss flower is as small as rice, as tiny as dust, there will always be a corner in the nature to put our existence, but also learn to blossom themselves, to prove their own value.

The poetry world in the Sheng Tang Dynasty can be said to be full of poets, in which landscape and garden poetry has made a long-term development, and Wang Wei's landscape and garden poetry is unique in many poets' landscape and garden poetry with its elegant natural beauty. The outline of natural beauty in his poems is always full of poetry and picturesque, thanks to his high attainments in painting. Su Shi, one of the "Eight Great Poets of the Tang and Song Dynasty", who is the main representative of the famous bold and free school, once commented on Wang Wei, saying, "Taste Moqizi's poems, there are paintings in the poems. When you look at Mochizuki's paintings, there is poetry in the paintings." It can be seen that Wang Wei had cleverly implanted painting techniques in his landscape and idyllic poems, so that the viewers could feel the beauty of nature directly conveyed by the poems as if they were in the realm. Specifically, painting is concerned with light and shadow, distance and nearness, movement and static, intensity and lightness, etc. The beauty of painting is at Wang Wei's fingertips, and the so-called "poetry and painting" can probably be understood in Wang Wei's works. In the poem "Autumn Night in the Mountain Dwelling", he created a vivid picture of autumn, "After the new rain on the empty mountain, the weather comes late in autumn. The moon shines between the pines, and the clear spring flows over the stones. The bamboo clamour returns to the raccooness, the lotus moves under the fishing boat." It depicts the openness of the mountains, giving people a sense of freshness, coolness and nature, and also explains the season in which the poem was written. The poem not only shapes a refreshing and bright natural scenery, but also has a meticulous description of the representative scenery, as if it has vitality, making the whole picture more spiritual, jumping and full of interest. The whole poem is much different from the common winter scene, and even has more unique flavour. Through this description, the natural scenery becomes full of vigour, which reflects the poet's state of mind and feelings during the creation of the poem, and also lets the readers fully feel the poet Wang Wei's love and closeness to the natural scenery.

The same sentiment can be felt in Yuan Mei's poem "Moss", which directly anthropomorphises the moss flower's tenacious vitality, but shows Yuan Mei's immense love for the moss flower, i.e., "I see the green hills are more charming, and I expect that the green hills will see me as well", and the word "learn" makes the whole poem more humane than Wang Wei's "Autumn Night at Mountain Dwelling". The word "learn" makes the whole poem more full of humane flavour compared to Wang Wei's "Autumn Night in the Mountain Dwelling", and the whole poem, in just a few words, sketches out the realm of the lane, and the beauty of the nature can be seen in the poet's deep heritage.

2. The idyllic beauty of "Moss" interpretation

"Moss" is a natural expression of the poet Yuan Mei's inner feelings, sincere, honest, not pretentious, the pursuit of true nature and "poor is good for itself, and to achieve is to help the world," the traditional concept is not contrary to the ancient hermit to maintain the spirit of quiet and free personality.

Yuan Mei's career as an official is incompatible with the high and pure interest, coupled with unrecognised talent, the poor career leads to inner depression and bitterness, the latter half of his life to choose to resign from the city hidden life path and his life experience is closely related. Yuan Mei's poem "Feelings" says: "An official runs around with empty skin and bones; all things are difficult to read the years." It clearly expresses the poet's lament for the hardship of the officialdom, and sends his love to the joy of idylls and the tour of mountains and waters. There is helplessness in the sentence, but also to see its free and open attitude towards life, put down at the right time, in order to win the freedom of life, between the vertical and horizontal trade-offs, contains a rich philosophy of life.

Idylls can be traced back to the philosophical and artistic spirit of Zhuangzi, an important founder of the Taoist school in the pre-Qin period, whose unique ideas, humanistic concerns and aesthetic tendencies set the tone of the spirit and aesthetic character of classical Chinese art and depicted the "free" realm of life and the philosophical outlook of the Taoist school of thought, which greatly contributed to the awakening of the artistic subject and influenced people's aesthetic and artistic creation in the Wei and Jin periods. It also depicted the realm of life and the philosophical concept of Taoism, which greatly contributed to the awakening of the artistic subject, and also influenced people's aesthetics and artistic creation in the Wei and Jin dynasties. After the Eastern Han Dynasty, although Confucianism still played a dominant role, it lost its supremacy and was in relative decline in politics and ideology, while Xuanxue and Buddhism became the two major ideological and cultural forces outside Confucianism, influencing the literary creations of later generations. The spirit of idyllic poetry was inherited from the metaphysics of the Wei and Jin dynasties, in which people experienced nature with a dashing mind and metaphysical meanings. The poet Xie Lingyun of the Northern and Southern Dynasties was the prototype of idyllic poetry, and the best exponent of idyllic poetry at the end of the Eastern Jin Dynasty, Tao Yuanming, wrote: "I am not suitable for the common rhyme, but I love the hills and mountains by nature." Not only indifferent to fame and fortune, but also peaceful and happy, advocating nature, leaving behind the "I can not for the five buckets of rice bend down" of the best words, including his reading is "good reading, do not seek to understand, every have a good idea, will be happy to pen", the zither is a stringless zither, a great deal of spontaneity for the meaning of the poem. Just like the poem: "the sea is wide enough for the fish to leap, the sky is high enough for the birds to fly", there is no need to cope with the situation, no need to pretend to cover up, no need to hide, do what you want without going beyond the rules, this is the natural situation that Tao Yuanming's poems show in his daily life, which forms the uniqueness of Tao Yuanming's idyllic poems that are kind and natural and full of poetic meaning of life. It can be seen that Tao Yuanming's idyllic poems have already "developed the sense of nature from a philosophical realm and an aesthetic realm to a living realm"¹. In other words, the natural realm in Tao Yuanming's poems has been fully integrated into the life, which is a harmonious unity of the living of the natural realm and the naturalisation and aestheticisation of the living realm.

¹ Qian Zhixi: *The Pre-Tang View of Life and the Theme of Literary Life*, [M], Beijing: Oriental Publishing House, 1997, p. 319.

Yuan Mei wrote "Moss" in a unique way after returning to his hometown, integrating the personality of aloofness and tranquility, tenacity and clumsiness into his small life. The ancients paid attention to the unity of man and nature, living in harmony with nature, the idyllic poem reflects Yuan Mei's positive vision and emotions to appreciate the beauty of idyllic landscapes, and Zhuangzi's concept of "simplicity and the world can not compete with the beauty of the world" coincides with a new approach and style to create a new landscape idyllic poem, the philosophical implications of the poem permeate the reader to recall the beauty and appreciation of nature. The philosophical meaning of the poem permeates the reader's appreciation of the beauty and nature, and the dialectical and united artistic expression of removing the rough and extracting the essence and simplifying the complexity into simplicity creates a unique artistic beauty, and the poem, once it is philosophical, also has the blessing of the very poetics.

The performance of poetry in various periods of history is diversified, and the theoretical views of many words are easily noticed and recognised by the world, but things or phenomena which are commonplace and not perceived by the people can sometimes reflect people's deeper ideological concepts in a more genuine way. This is also true for the creative form of poetry and lyrics. Poetry and song are the products of history, with deep cultural meanings. When a particular form of poetry echoes with the way of feeling of the current group and the spirit of the times, it will be generally accepted, which is the basis for the prosperity of some forms of poetry in a particular era. In the literary world of the Qing Dynasty, some creative forms were fashionable, and these creative forms were often intertwined and used at the same time, of course, such as the idyllic poetry creative form appeared before the Qing Dynasty, but until the Qing Dynasty, another way to the popularity of the situation, which is a phenomenon worth noting, because these creative forms reflect the people's interest in the poetry of that time is very different. The Qing Dynasty, as the last dynasty of the feudal society of China, since the beginning of the Wei and Jin metaphysics, the style of landscape and idyllic poetry in the Qing Dynasty became more common, and the prosperity of the poems and poetic researches created was unprecedented. In the Qing Dynasty, Zhao Yi's "On Poetry" said, "There are talented people in the rivers and mountains, and each of them has led the style for hundreds of years." It can be seen that the poetic style advocated by Yuan Mei during this period had a profound influence on the poetry world at that time.

3. Interpretation of the Sexual and Spiritual Beauty of "Moss"

"Aesthetics itself is a kind of practical botany, though the object is not the plant but the work of man."² When Yuan Mei expressed the basic knowledge of moss in his poems, he used a way that was easy for the public to relate to, appealing not only to reason, but also to the moss's aura-filled expression of emotion, "That is why Zhou Ji said, 'When you first learn a word, you seek emptiness, and when it is emptiness, you will have an exchange of aura.' Aura exchange is when the object presents the life of the soul, when the sense of beauty is born."³ This pursuit of expression is more of a human attitude and philosophical thinking, as described by Mr Zhu Guangqian: "There is a Chinese proverb that says, 'It is better for the King Kong to look angrily than for the Bodhisattva to lower his eyebrows.' The so-called angry eyes is to show; the so-called lowered eyebrows is to be

² [French] Danner, *Philosophy of Art*, [M], translated by Fu Lei, Beijing: Sanlian Bookstore, 2016, p. 19.

³ Zong Baihua: *The Realm of Art*, [M], Beijing: Peking University Press, 1989, p. 177.

subtle. Whenever one looks at the image of a deity with a bowed head and closed eyes, the impression created is often particularly profound."⁴ The quiet subtlety revealed through the moss in the poem can be a spiritual baptism for the poet, so that he can appreciate that artistic images can purify the mind and are truly natural and touching.

Poetry speaks of true nature is to emphasise the inner emotions, "Poetry has a very plain, but deep meaning." Borrowing moss to reason is the characteristic of this poem "Moss", which blandly uses metaphor and anthropomorphism. Due to its smallness and poor living environment, it cannot normally enjoy the wind, rain and sunshine, and through the four seasons, it tenaciously and confidently realises its own values and ideals amidst the adversity. The artistic expression of this aria is full of interest and contains such eternal propositions as subjectivity and objectivity, advantage and disadvantage, appearance and essence, smallness and greatness. The style of the whole poem compares the moss to himself, with the allusion to Cao Zhi's "Seven Steps Poem" in the Three Kingdoms period: "Boil beans and hold them as a soup, and strain the beans to make juice. Beanstalks burn under the kettle, beans cry in the kettle. They were born from the same root, why are they so anxious to fry each other?" There is a similarity and similarity between these two poems. Cao Zhi was forced to compose a poem full of grief and indignation over his own situation and the hand-to-hand conflict. Whether borrowing beans as a metaphor for oneself or moss as a metaphor for others, what needs to be emphasised is that the poet's true nature is revealed, and the thoughtfulness of what makes a person a person, which is also the reason why classic poems are always touching.

Li Bai, the emotional poet who has been able to resonate for thousands of years, said in his poem, "The light of the bright moon in front of the bed is suspected to be the frost on the ground; raise your head to look at the bright moon, and lower your head to think of your hometown." The poem is extremely simple and catchy, the poet transforms the scenery into a lyrical poem, unconsciously integrating his thoughts, ideas and feelings into it, and its spiritual connotations and the extremely sweeping spiritual sentiments and heights contained behind it are marvellous to behold.

The content of a poem's subject matter is good or bad, and the circulation or not, depends on the nature of the real basis of the poet's pen whether or not the spirit of the living, that is, whether or not to follow the "sexual spirit" of the principle of creativity. "This reflects the gradual emancipation of ideas and the continuous opening up of the social atmosphere at that time..... He also advocated the true temperament, true learning, and knowledge of poetry in writing, and as a result, it guided Qing poetry to develop in the direction of elegance and flexible style....."⁵ It also reflects the main characteristics of Qing poetry. Yuan Mei, as one of the most influential figures in Qing poetry, greatly contributed to the development of Qing poetry. Yuan Mei's resignation from his official post and return to his hermitage had built up a deep poetic background for his poetry, which laid the foundation for his unique school of "Spiritual Poetry". He entered poetry with profound literary skills, and created a realm of artistic beauty for his spiritual poems. Nature is a kind of high demand for formal beauty, and in the openness, leisure and lightness of nature, he started from the harmony of content and form to show the perfect unity of spirit and form, and showed his noble, reserved, and dashing and uninhibited feelings in the best possible way. It is said that Yuan Mei's poems

⁴ Zhu Guangqian: *Zhu Guangqian quanji (The Complete Works of Zhu Guangqian) (Volume 1)*, [M], Hefei: Anhui Education Press, 1987, p. 65.

⁵ Qian Zhonglian and Yan Ming, *A New Essay on Yuan Mei* [J], *Literary Heritage*, 1994, No. 2, pp. 98-99.

created a new era, and his poems promoted the development of poetry in the Qing Dynasty and wrote a brilliant chapter in the long history of Chinese literature. Yuan Mei's political ambitions were not met with success, so he retired to the mountains and sent his love to the landscape, a large number of poems written during this period have a high artistic value, and have a greater impact on future generations, which is not unrelated to the influence of the times, and it can even be said that it was the socio-political climate at that time that created the reclusive and avoiding the world of the Yuan Mei to see the magnificence of the mountains and rivers and the beauty of the poetic science.

Conclusion

"The beauty of the art form is inferior to the appreciation of the content of life, and elegant interest gives way to worldly reality."⁶ Art reflects life, and the core of art is the "beauty" of life. Yuan Mei takes nature as the beauty, idyll as the beauty, and spirit as the beauty, which is enough to show that the poem "Moss", from the subject matter, content, means of expression to the aesthetic consciousness, shares the artistic characteristics of the "spirit" school of poetry, i.e., it unites the truth, goodness, beauty and true nature. It is enough to show that the poem "Moss", from the subject matter, content, means of expression to aesthetic consciousness, shares the artistic characteristics of the "Spiritual" school of poetry, that is to say, it unites the truth, goodness, beauty and true nature, which is of vital significance for the construction of contemporary aesthetics and values, and there are at least three aspects that can be learnt from it. The second is that the artist in the creation of the existing experience and skills can be appropriate to put down, with the most sincere creative approach to creation, the third is the creation of a quiet heart into the emotions, so that the formation of art works in the realm of form and technology, so that will create more and better works of art.

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Conflict of Interest

The authors declare no conflict of interest.

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⁶ Li Zehou, The Course of Beauty [M], Beijing: Sanlian Bookstore, 2009, p. 193.

Exploring Marketing Models in Mobile E-commerce

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Abstract

This article analyzes the advantages of interactive marketing models in mobile e-commerce, and discusses the methods of constructing new marketing methods for mobile e-commerce from six characteristics: convenience, security, diversity, innovation, autonomy, and interactivity. It is hoped that this research can provide some reference for relevant personnel, help enterprises accurately position the market, optimize e-commerce marketing strategies, and ultimately achieve significant improvement and sustainable development of mobile e-commerce marketing goals.



Full Text Article



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Keywords: mobile e-commerce; Marketing model; Interactive Marketing

The advantages of mobile e-commerce marketing model

The Convenience of Mobile E-commerce

Mobile payment technology has been widely popularized in China, greatly facilitating people's lives. When handling electronic payment transactions, the public only needs to use the mobile payment function to quickly complete payments, without the need to physically visit banks or other designated locations. Transactions take effect immediately, thereby accelerating the sales and circulation of mobile e-commerce. There are various forms of mobile payment, including remote payment, home payment, and face-to-face payment. The choice of payment method mainly depends on the geographical location and transaction nature of the transaction partner. According to the different payment time points, mobile payment can be further divided into online payment and offline payment. For example, the online transfer operation through Alipay belongs to the online payment category. With the continuous advancement of technology, the application of mobile payment methods in China's e-commerce market has become increasingly frequent, which not only reflects the new trend of interactive marketing in mobile e-commerce, but also brings more convenience to residents' daily consumption.

The Security of Mobile E-commerce

In the transaction process, the flow of information between merchants and consumers is indispensable. Without effective protection measures, the risk of information leakage will significantly increase, especially in interactive marketing models. Due to frequent interactions between merchants, platforms, and consumers, the security of e-commerce faces greater challenges. To ensure transaction security in mobile e-commerce interactive marketing, both merchant and consumer information must go through a strict review process to verify the authenticity of the information and safeguard transaction security. At the same time, this also provides strong guarantees for preventing information leakage and solving information security issues. When implementing interactive marketing models, mobile e-commerce is committed to building secure and private consumption channels, attaching great importance to consumer privacy protection, and usually effectively preventing information leakage incidents from occurring. The security features demonstrated by mobile e-commerce not only provide it with broader development prospects, enabling it to firmly root in modern economic society, but also further promote the prosperity and development of the economy.

Diversification of Mobile E-commerce

The interactive impact patterns of mobile e-commerce demonstrate rich diversity. With the continuous optimization and expansion of the Internet environment, many businesses have set foot in the field of e-commerce and adopted the interactive marketing model, which has greatly expanded the scope of consumers' shopping choices, enabling them to choose their favorite products according to their own preferences and needs. The diversity of mobile e-commerce is its most prominent advantage. With the improvement of material living standards, consumers' demands are becoming increasingly diversified, and they pay more attention to the richness of products in the market. E-commerce platforms happen to provide a platform for showcasing such diversified products, meeting consumers' needs. The interactive marketing model not only provides consumers with more screening criteria, but also further enriches the product categories on e-commerce platforms, ensuring that consumers can find products that meet their own needs. Overall, the diversity of mobile e-commerce is in line with the trend of the times, creating more opportunities for its sustainable development.

The Innovation of Mobile E-commerce

The limitations of traditional marketing models in marketing processes and management have long constrained the market expansion and brand development of e-commerce enterprises. To overcome this challenge, e-commerce companies need to leverage mobile e-commerce technology to innovate their marketing methods and strategies, in order to more effectively promote their brands, shape strong brand effects, and in turn drive the overall marketing and growth of the enterprise. For example, the successful case of e-book advertising demonstrates how to break through the framework of traditional marketing models and greatly enhance consumer interest and participation through the use of online videos as a novel promotional method. This approach not

only breaks the limitations of traditional marketing, but also fully utilizes the potential of digital media, bringing broader market influence and business opportunities to enterprises.

Autonomy of Mobile E-commerce

Internet marketing means, by virtue of its ability to transcend time and space boundaries, enable consumers to easily access the official websites of commercial enterprises through mobile phones, instantly browse products and obtain preferential information, thus stimulating their consumption desire. With the continuous improvement of China's Internet technology, the consumption mode of e-commerce has also been continuously optimized and upgraded. Consumers can now directly purchase goods on the e-commerce platform, without having to visit the official website of the commodity producer alone. This emerging consumption model and the operation mode of e-commerce platforms have significantly improved the efficiency and effectiveness of e-commerce, enabling consumers to enjoy the convenience of shopping anytime and anywhere. In addition, the booming development of China's express logistics industry has further promoted the prosperity of modern mobile e-commerce business. Currently, the development of mobile e-commerce not only creates a large number of job opportunities, but also plays a positive role in promoting China's economic growth and social progress.

The interactivity of e-commerce

Consumer feedback is crucial for businesses as it plays a key guiding role in their production and marketing processes. By listening to consumers' voices, companies can gain insights into the direction of product improvement, thereby enhancing the overall competitiveness and market performance of their products. With the increasing maturity of e-commerce business, the communication bridge between consumers and product producers has become broader. Nowadays, consumers can leave messages directly on the product purchase page to communicate with businesses in real-time, and businesses can more intuitively convey their design concepts to consumers. This efficient communication mode not only helps to better safeguard the legitimate rights and interests of consumers, but also enables enterprises to innovate their product designs based on consumers' valuable opinions, making them more in line with consumers' preferences, thereby comprehensively improving product quality.

The necessity of building a mobile e-commerce marketing model

Due to the widespread use of smartphones, not only has it greatly propelled the pace of technological innovation, but it has also profoundly promoted the flourishing development of the e-commerce industry. In this context, in order to meet the growing demand for selling and purchasing goods through the internet, the mobile e-commerce industry is facing unprecedented development opportunities and challenges. In order to keep up with the trend of the times and produce products that are more in line with social development trends, the industry urgently needs to build a new e-commerce marketing model that meets the requirements of the times. This new marketing model should not only fully utilize the convenience and popularity of smartphones, but also further expand

the boundaries of the e-commerce market through innovative strategies and means, tap into potential consumer groups, improve user experience, enhance user stickiness, and promote the entire mobile e-commerce industry to a higher level of development. At the same time, this will also bring new growth points for enterprises in the related industry chain, promoting economic diversification and sustainable development.

Methods for Building Marketing Strategies for Mobile E-commerce

Enhance brand awareness

Compared to traditional marketing methods, there is relatively less consumer consultation behavior in the online browsing environment, and the customer base covered by the internet is more extensive, which means that online marketing has more potential customers. In order to effectively utilize online resources and convert these potential customers into actual consumers, the key is to deepen consumers' understanding of corporate culture information. Therefore, in the process of promotion, enterprises should fully demonstrate the power of their brand, carefully build and maintain their brand image, in order to enhance their corporate culture and brand awareness, attract more potential customers, and expand their customer base.

QR code marketing method

In recent years, mobile QR code marketing has gradually emerged as an emerging marketing tool. QR codes have won widespread praise in applications due to their large information storage capacity, comprehensive recognition ability, and powerful information error correction function. In enterprise marketing activities, mobile QR codes can almost contain all necessary marketing information, including product introductions, image materials, video files, etc. Consumers only need to scan the QR code through mobile software to easily access various information provided by the enterprise, and have the opportunity to participate in interactive activities such as lucky draws organized by the enterprise. By adopting QR code marketing, enterprises can not only significantly improve marketing efficiency and effectiveness, but also greatly enhance the interaction and quality with consumers. They have successfully integrated traditional marketing models with modern media businesses, laying a solid foundation for further expanding their sales market.

SMS website marketing methods

SMS website is a website registered based on natural language on the mobile Internet, which provides a direct and flexible marketing access point for enterprises. In marketing activities, enterprises can directly send information containing website links to consumers' mobile devices through mass SMS, guiding consumers to click on the links to access the enterprise website. This method is highly efficient and effective, and can quickly attract consumers' attention. In addition, when enterprises use this marketing method, they can also effectively integrate mobile communication and Internet services, which not only provides convenient services for consumers, but also opens up broad space for the development of enterprise business. According to relevant research, the main business entities that use SMS website marketing methods are mostly in the

mobile communication industry, etc. These industries can also use SMS mass sending methods to widely promote product discounts and promotions.

Wireless network marketing methods

Wireless network marketing covers a wide range of content, mainly involving two categories: WAP websites built by well-known enterprises, and WAP platforms developed by enterprises themselves. These websites or platforms serve as a bridge between businesses and consumers, displaying product related information and images (in ISO format, etc.) intuitively, making it easy for consumers to access product details. In order to enhance user experience, merchants often use wireless LAN technology to allow customers visiting the mall to access the merchant's specially designed wireless network page through their mobile devices. On this page, customers can directly view discount, promotion and other promotional information to stimulate their purchasing desire and promote consumption. Furthermore, some shopping malls may require customers to enter their mobile phone numbers to obtain wireless network access. This measure not only provides customers with convenient internet access, but also allows shopping malls to directly obtain customers' contact information, making it easier to push marketing activity information through SMS in the future.

Marketing methods for mobile business districts

Mobile commercial district marketing, also known as the mobile commercial street model, is highly favored by users due to its convenience. In this mode, users can easily enter the business circle and select the goods they need. Taking Taobao as an example, this e-commerce platform can be regarded as a model of mobile business district marketing, with a wide range of business scope covering multiple aspects of life such as clothing, food, housing, and transportation. When consumers shop in the mobile business district, they only need to search for their favorite products on the platform to quickly obtain basic information about the products. If necessary, you can also communicate directly with the seller through the chat window to gain a deeper understanding of the product details. The entire consumption process is completed within the mobile business district, which not only effectively reduces the sales costs of merchants, but also saves purchasing costs for consumers, achieving a win-win and convenient situation for both producers and consumers of goods.

Mobile Search Marketing Model

The mobile search marketing model is known for its high degree of initiative and precision. In the implementation process, various means such as voice search, WAP search, and SMS search can be used. Through these search methods, users can quickly obtain the information they need when searching for their desired products, resulting in ideal usage and user reviews. Although voice search has advantages in convenience, given that the current domestic voice search technology still needs improvement, it may have a certain impact on consumers' search experience and merchants' services in practical applications. Therefore, relevant technical departments need to continuously

optimize voice search services in order to better serve user search and merchant marketing. However, overall, this mobile search method has brought many conveniences to users' purchasing behavior and merchants' sales activities, making it a marketing tool worth promoting widely.

Building a modern mobile e-commerce technology platform

In the contemporary mobile e-commerce technology system, wireless application protocols, packet wireless services, and mobile location services play core roles. With 5G technology, users can seamlessly access the Internet to fully meet the needs of consumption, production and sales. The application of mobile IP services ensures the roaming ability of users in different network environments by flexibly switching between fixed network addresses and mobile nodes, so that users can easily access the Internet whenever and wherever they want. The network not only has powerful functions and excellent performance on the mobile phone, but also is compatible with the computer service, realizing the Internet information retrieval without network cable constraints. Mobile location technology plays a key role in the process of using the Internet to retrieve information. Enterprise merchants can use this technology to accurately locate users and implement precise marketing strategies, significantly improving the efficiency and results of marketing activities.

Application Model of E-commerce Based on Interactive Marketing

In the context of traditional mobile e-commerce, the key for enterprises to shape a positive brand image is to win the trust and recognition of consumers. For this purpose, merchants will leverage mobile operators or service providers to push commercial data to potential consumer groups. After receiving this data, consumers can actively access the merchant's product sales platform to gain a deeper understanding of the merchant's information. Merchants further optimize product data based on consumer feedback to better match consumer needs and enhance the overall competitiveness of their products. In addition, in order to improve communication efficiency and effectiveness, enterprises can also build their own consumer platforms and directly publish marketing information to consumers through the platform, allowing consumers to obtain product details in real time.

Application Management Model in Mobile E-commerce Marketing: A Case Study of Short Video Marketing

Application Management of Typical Short Video Marketing Platforms

Enterprises can choose to publish videos on major social media platforms, such as Tiktok, Kwai, video number and microblog. Through the user traffic and social communication effects of these platforms, the exposure and influence of videos can be improved. Meanwhile, by utilizing appropriate tags and keywords, optimize the search ranking of videos and increase their chances of being discovered. In addition, collaborating with internet celebrities/KOLs (Key Opinion Leaders, a marketing concept that refers to people who have more professional and accurate product information, are recognized by a large number of users, and are easily guided to reach transactions,

with significant influence), and involving them in video production and promotion can leverage their influence and fan base to expand the audience of the video and enhance its dissemination effect.

Production and Communication Management of Marketing Content

Carefully plan the content theme: explore hot topics, firmly grasp trend elements, grasp user needs, highlight product selling points, and combine the positive story background of the brand to design highly innovative content.

Clear brand positioning: Clearly define the target audience and core values of the product to ensure that the theme elements of short video content align with the brand image, thereby gaining more attention from the target audience.

Content creation and production

Creative concept: Emphasize originality and uniqueness, attract audience attention through elements such as plot, visual effects, music, etc.

Video production: Adhering to the characteristics of short video e-commerce (such as short duration, fast pace, and large amount of information), using professional filming equipment and technology to ensure video quality.

Selection and Management of Communication Channels

Analyze the characteristics and user attributes of each short video platform, and select channels suitable for brand communication, such as Tiktok, Kwai, Little Red Book, etc. Develop cross platform promotion strategies, including native advertising, KOL collaborations, challenge competitions, and other forms, to increase exposure and influence. Balancing precise delivery, effective interaction, and scientific data-driven decision-making, forming a closed-loop optimization management process.

Short video user engagement and interaction management

User participation and interaction, such as bullet comments, play a crucial role in short video platforms. They not only directly promote consumer purchasing behavior, but also play a key role in improving user experience, enhancing user stickiness, expanding brand influence, and achieving marketing goals. In order to effectively utilize this mechanism, short video platforms and content creators need to carefully design interactive strategies and build a positive, active, and sticky user ecosystem.

In terms of interactive content design, short videos can incorporate various interactive elements such as Q&A, voting, challenges, etc. These elements can stimulate users' enthusiasm for participation, encourage them to comment or create related videos to respond. At the same time, using popular topic tags is also an effective way to attract user participation. It can trigger extensive

discussions and encourage more users to participate in related video production and sharing activities.

In order to further motivate users' interactive behavior, short video platforms can establish reward mechanisms such as leaderboards, point systems, and virtual gifts. These rewards can not only stimulate users' interactive behaviors such as commenting, liking, and sharing, but also enhance their sense of belonging and loyalty to the platform. In addition, organizing user generated content competitions or solicitation activities is also an effective way to enhance user engagement. By giving outstanding participants physical prizes, certification marks, or other forms of recognition, it can further stimulate users' creative enthusiasm.

Collaborating with influential bloggers or internet celebrities is an important way to increase user engagement in community building. These KOLs have a huge fan base, and their participation can quickly attract a large number of users to follow and participate in interactions. Meanwhile, establishing official fan groups or interest groups is also an effective way to enhance communication and sense of belonging among fans. By regularly posting interactive topics and exclusive benefits, we can further consolidate the cohesion and activity of our fan base.

Personalized recommendation is an important means to increase user viewing time and interaction probability. By utilizing artificial intelligence and big data technology, short video platforms can accurately push video content that users may be interested in based on their viewing history, preferences, and behavior data. This personalized recommendation method can not only enhance users' viewing experience, but also increase opportunities for interaction between users and the platform.

Conclusion

With the continuous advancement of science and technology, mobile e-commerce models for marketing on mobile payment platforms have emerged one after another, and mobile e-commerce marketing has achieved good results. With the continuous promotion and popularization of mobile e-commerce, the further development of mobile payment and e-commerce technology will also give rise to more marketing models, and e-commerce will also develop new achievements. So in order to further promote the progress and development of China's e-commerce industry, it is necessary to be based on reality and innovate e-commerce interactive marketing.

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Game Narrative Design: Plant Trivia, World-building and Player Engagement in *Plants vs. Zombies*

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Abstract

In the *Plants vs. Zombies* universe, plants are not merely weapons for players to overcome obstacles; they are also vivid characters with rich tales. Based on the Environmental Storytelling Theory (Jenkins, 2004), this study mainly examined the variations in the trivia narratives of three plant types and the relationship between the Plant Trivia narratives, world-building, and player engagement in *Plants vs. Zombies*. From the humanistic background, operational logic, and natural environment perspectives, there are significant variations in the trivia narratives among aggressive plants, sacrificial plants, and supportive plants. The Plant Trivia narratives may interact with the *Plants vs. Zombies* world-building through demonstrations of plant images, animations, and player missions. Additionally, players' engagement in non-textual narratives may be enhanced by the Plant Trivia within the *Plants vs. Zombies* world-building. This study may provide some perspectives on the game design of character narratives involving the interaction between textual and non-textual elements in tower defense games.



Full Text Article



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Keywords: Game Narrative; World-building; Player Engagement

1. Introduction

The game does not constantly attempt to tell a story; rather, it employs story elements to make its rules and mechanics accessible and adaptable (Sengun, 2022). Interpretation should be regarded as the end result that guides the refinement of narrative design (Rivera et al., 2023). As a unity of carefully selected game mechanics, narrative design adheres the story elements in either textual or symbolic/visual form with the aim of fulfilling the desired gaming experience for the players (Koenitz, 2024). Game narratives have been examined from player engagement and meaning-making (Maine, 2017), postcolonial co-production (Lammes & Smale, 2018), formal complexity

and its connection with audience response (Bellini, 2021), emergent narrative and brand co-creation behaviors (Burgess & Jones, 2022). The discourse analytical approach has been applied to studies in game design, including exploratory thematic analysis (Lu et al., 2019), content analysis, and correspondence analysis (Tang & Zhang, 2019).

As a tower defense video game, *Plants vs. Zombies (PvZ)* has received wide acclaim since 2009. Players are required to strategically position a variety of plants to prevent an army of zombies from entering their house and devouring their brains. The game showcases different types of plants, each with distinct capabilities, and several types of zombies, each with their own traits, creating a dynamic gameplay experience. Previous studies on *PvZ* mainly focused on life-and-death educational meaning (Zhang, 2015), in-house pharmacy (Yap et al., 2016), players' behavior (Johannes et al., 2021). World-building involves the development of all the details of the world in which a story occurs, including its history/geography, peoples/races, governments, science/technology, religions, and languages (Heussner et al., 2015). In reality, apart from dialogue and authored missions, most of the game's world-building is concealed (Paterson et al., 2019). However, few studies have delved into the Plant Trivia in *PvZ*, much less its connection to game world-building and player engagement. According to the Environmental Storytelling Theory (Jenkins, 2004), the Plant Trivia may establish the preconditions for an immersive *PvZ* narrative experience in four ways: evoking pre-existing narrative associations; offering a staging ground where narrative events are enacted; embedding narrative information within their mise-en-scene; providing resources for emergent narratives.

This study mainly probed into the game narratives in Plant Trivia of the original version of *PvZ*. As the beginning of the *PvZ* universe, the roles of plants in this version laid the foundations for the subsequent versions. Regarding the five natural battling scenes: day, night, pool, roof and fog, plants are categorized into the following three types based on their functions in community battles, as indicated in Table 1.

Table 1 Classifications of Plants in *PvZ*

Types	General Descriptions	Examples
Aggressive	Directly attack zombies, no self-destroying (unless intentionally bitten by zombies)	Peashooter shoots peas forward. Fume-shroom emits a penetrating spore cloud. Cactus fires spikes.
Sacrificial	Distract, delay, or sacrifice themselves	Cherry Bomb explodes when placed, destroying zombies in a certain area. Wall nut slows down zombies by absorbing damage.
Supportive	Provide energy, coins or weather condition	Sunflower generates sun points for more plants. Lilypad places non-water plants on water.

2. Methodology

2.1 Tagging Framework

The in-depth content analysis of the Plant Trivia narratives is conducted based on the following Table 2.

Table 2 the Plant Trivia Tagging Framework

Categories	Sub-Categories	Examples
Humanistic Background	Traits & Emotions	<i>Chomper's not resentful, though. He says it's just part of the business.</i>
	Experience & Hobbies	<i>It was a crazed night of forbidden science that brought Twin Sunflower into existence.</i>
	Inter-Plants Relationships	<i>Explode-O-Nut: How could there be anything between us? We are brothers. If you knew what Wall-nut has done for me...</i>
Operational Logic	Game Mechanism	<i>Sun-shroom hates sun. He hates it so much that when it builds up in his system, he spits it out as fast as he can.¹</i>
	Plants Functions	<i>Wall-nut: "People wonder how I feel about getting constantly chewed on by zombies,"</i>
Natural Environment	Environmental Adaptability	<i>Other plants eat light and excrete oxygen; Plantern eats darkness and excretes light.</i>
	Natural Elements Application	<i>Magnetism is a powerful force. Very powerful. Sometimes it scares Magnet-shroom a little.</i>

¹ This can also be seen as a personal trait of Sun-shroom. However, this trivia can reflect the inability of some night plants in the day scene, and thus it is classified into the interpretation of the game mechanism.

2.2 Research Questions

This case study managed to address the three questions:

- (1) How do the trivia narratives of aggressive, sacrificial and supportive plants in PvZ vary in humanistic background, operational logic and natural environment?
- (2) How do the Plant Trivia narratives interact with the PvZ world-building, along with related visual elements?
- (3) How do the Plant Trivia narratives contribute to player engagement within the PvZ world-building?

3. Results

3.1 Variations in the Plant Trivia Narratives between Three Types of Plants

The narrative variations of the Plant Trivia in humanistic background, operational logic and natural environment are respectively demonstrated in Table 3, Table 4 and Table 5.

Table 3 the Plant Trivia Narratives Variations in Humanistic Background

Humanistic Background	Aggressive Plants	Sacrificial Plants	Supportive Plants
Traits & Emotions	Determination; Hidden desire for love ²	Bravery Self-sacrifice	Contentment & Contemplation ³
Experience & Hobbies	Combat-oriented Hobbies	Narrating impacts of immediate actions	Focus on oneself ⁴
Inter-Plant Relationships	Combined Performance ⁵	Close-relationships ⁶	Nurturing relationships

² Repeater is fierce. He's from the streets. He **doesn't take attitude from anybody**, plant or zombie, and he shoots peas to keep people at a distance. Secretly, though, Repeater **yearns for love**.

³ Marigold spends a lot of time deciding whether to spit out a silver coin or a gold one. She thinks about it, **weighs the angles**.

⁴ Pumpkin hasn't heard from his cousin Renfield lately. Apparently Renfield's a big star, some kind of... what was it... sports hero? Peggle Master? **Pumpkin doesn't really get it**.

⁵ Everybody likes and respects Torchwood. They like him for his integrity, for his steadfast friendship, for his ability to greatly maximize pea damage.

⁶ "I wanna explode," says Cherry. "No, let's detonate instead!" says his brother, Cherry. **After intense consultation they agree to explodonate**.

Table 4 the Plant Trivia Narratives Variations in Operational Logic

Operational Logic	Aggressive Plants	Sacrificial Plants	Supportive Plants
Game Mechanism	Continuous,ranged attacks ⁷	Immediate, high-impact effects	Five scene & Plants restoration ⁸
Plants Functions	Descriptions of weapons	Descriptions on attacking processes ⁹	Details on resources provided

Table 5 the Plant Trivia Narratives Variations in Natural Environment

Natural Environment	Aggressive Plants	Sacrificial Plants	Supportive Plants
Environmental Adaptability	Few related narratives		Environmental-dependent Performance ¹⁰
Natural Elements Application	Some directly apply natural elements in attack ¹¹		Directly apply natural elements to support the team ¹²

3.2 Relationship between the Plant Trivia Narratives and the PvZ World-building

The Plant Trivia narratives are closely interrelated to the overall PvZ world-building through related visual elements like plant images, animations, and player missions. Compared with machinery zombies, plants are not merely weapons for players to overcome obstacles; they are also vivid characters with rich stories in the PvZ universe. Firstly, the Plant Trivia narratives are an

⁷ "Who's there?" whispers Scaredy-shroom, voice barely audible. "Go away. I don't want to see anybody. Unless it's the man from the circus." (A certain distance might be necessary for aggressive plants to attack zombies.)

⁸ Flower Pot: "I'm a pot for planting. Yet I'm also a plant. HAS YOUR MIND EXPLODED YET?" (Plants cannot be placed directly on the roof. Supportive plants, although not involving ATK, require solar energy for restoration.)

⁹ "Zombies are our friends," asserts Hypno-shroom. "They're badly misunderstood creatures who play a valuable role in our ecology. We can and should do more to bring them round to our way of thinking." (Zombies are compelled to attack other zombies, like the mission of plants.)

¹⁰ Why, the life-giving jazzy rhythm of the Earth itself, thumping at a frequency only Sunflower can hear. (Sunflower can generate more sun points during the day than at night.)

¹¹ Folks often tell Snow Pea how "cool" he is, or exhort him to "chill out." They tell him to "stay frosty." (Snow Pea utilizes ice in attack.)

¹² When Blover was five he got a shiny new birthday cake. Blover made his wish, huffed and puffed, but was able to extinguish only 60% of the candles. Instead of giving up, though, he's used that early defeat as a catalyst to push himself harder ever since. (The wind is utilized by Blover to improve visual clarity.)

impressive reflection of their images, achieving a personification effect. For instance, the helmet of Gatling Pea indicates its military experience. The trip of Spikerock to Europe reflects its extensive exposure to the ground. The “one head with a large head-like growth on the back” of Split Pea vividly portrays its double-directed image. More importantly, some Plant Trivia narratives show a strong contrast between their appearances and dispositions. For example, the spikes of Cactus “believe a spongy heart filled with love and goodwill” beneath its prickly shape. Cattail refuses to “be pigeonholed” despite her cute cat-like appearance. Grave Buster spends hours “volunteering at a local zombie rehabilitation center” although he looks terrifying. Secondly, the Plant Trivia narratives can vividly present the animation effects in the battle scene. For example, Sunflower’s “bouncing to the beat” indicates its body shaking when generating solar energy. The agreement of Cherry and its brother to explode depicts the squeezing between two cherries. Scaredy-shroom’s “Go away. I don’t want to see anybody.” describes its shrinking when zombies approach. Umbrella Leaf’s “SPROING! Woo!” vividly portrays its expanding to bounce back parachute zombies. Thirdly, the Plant Trivia narratives can signify player missions in *PvZ* — pushing zombies away from home by employing multiple plant weapons. For instance, “Everybody likes and respects Torchwood.” could imply Torchwood’s outstanding performance with pea-shooting plants. Also, Garlic’s “advanced Doctorate in Redirection” showcases another significant battling strategy — moving zombies between lines. Additionally, Potato Mine’s “leaving everything to the last minute” indicates that the implementation of Potato mine needs to be early, unlike other seconds-lethal sacrificial plants such as Cherry.

3.3 Contributions of the Plant Trivia Narratives to Player Engagement under the *PvZ* World-building

In *PvZ*, the rich Plant Trivia narratives can enhance players’ engagement in zombie battling. Apart from the stereotypical impression of trivial narratives from three types of plants signifying different qualities needed in life, such as bravery represented by aggressive plants, selflessness represented by sacrificial plants, and contentment represented by supportive plants, there are numerous interesting trivial narratives serving as a mirror to modern society, including psychological states, love, self-efficacy, and the human-nature relationship. Regarding the psychological state, the shrinking of Scaredy-shroom when strangers come closer is a vivid manifestation of social phobia. The feeling of “a relaxing back rub” expressed by Wall-nut when constantly being chewed by zombies absurdly describes a numbing mental state under great pressure. Love is also often mentioned in Plant Trivia narratives, such as the worries of Gatling Pea’s parents before their son’s enlistment in the military and Cactus’ longing to hug and be hugged. Although *PvZ* is a tower-defense game, some Plant Trivia narratives may suggest that there is no absolute opposition between plants and zombies. For instance, Hypno-shroom admits the valuable role of zombies in the ecology, and Grave Buster volunteers at a zombie rehabilitation center. Many Plant Trivia Narratives reflect plants’ self-efficacy, like Gloom-shroom’s delight in releasing heavy fumes and Garlic’s enthusiasm for line diversion. Regarding human-nature relationships, the Plant Trivia narratives mainly involve the metabolism of life as indicated by Sunflower’s perception of the “life-giving jazzy rhythm of the earth”; the necessary respect for natural power, such as Magnet-

shroom's trepidation regarding its magnetism; and the high-technology refinement of nature beings, such as the generation of Twin Sunflower.

4. Discussion & Conclusion

In game design, it is crucial to create a world that appears to function genuinely as an internally coherent fictional space (Johnson, 2020). Regarding players' inability to directly communicate with roles in tower defense games like *PvZ*, various trivia narratives from aggressive, sacrificial, and supportive plants serve as a significant channel for players to understand the *PvZ* universe and engage in non-textual narratives by defending their homes in successive battles. At its core, the world-building of *PvZ* is a large system composed of natural elements such as the sun and fog, diverse plant weapons, and battles to eliminate zombies. Out of curiosity for weapons rather than enemies, although zombies may have their own stories, players may tend to focus on the stories of plants. The consistency between the Plant Trivia narratives and the *PvZ* world-building can be demonstrated through previous analysis — variations in the trivia narratives from three types of plants regarding humanistic background, operational logic and natural environment, along with plant images, animations and player missions. Emotional attachment to game characters varies from feeling excited and powerful to feelings of mutual sympathy, care, and concern for the characters' well-being (Bopp et al, 2019). More importantly, although the player cannot choose which plant to represent, under the *PvZ* world-building, the engagement of players in the tower defense may be enhanced through elements of modern society reflected in the Plant Trivia narratives, such as social phobia and respect for nature.

Based on the Environmental Storytelling Theory (Jenkins, 2004), this study mainly adopted the content analysis approach to explore the variations in the trivia narratives of aggressive plants, sacrificial plants and supportive plants, as well as the relationship between the Plant Trivia narratives, world-building and player engagement in *Plants vs. Zombies*. The Plant Trivia in the first season of *PvZ* was tagged with a framework consisting of the humanistic background, operational logic and nature environment, each with several sub-categories. As demonstrated by the tagging results, apart from the predictable variations in accordance with the plants' functions, there were also some distinctive themes in each type of plants, such as the hidden desire for love of aggressive plants, the attacking process of sacrificial plants and the environment-dependent performance of supportive plants. Notably, the game mechanism, inter-plants relationship and the application of natural elements are elaborately indicated in all the three types of plants. The Plant Trivia narratives can be connected to the world-building in *PvZ* through the demonstration of plants' image, animation and player missions. Moreover, the Plant Trivia narratives may draw players into non-textual narratives by indicating common modern social themes, such as love, psychological state, self-efficacy and human-nature relationships. Eventually, the combined effects of Plant trivia narratives and the world-building of *PvZ* may enhance players' engagement in non-textual narratives. Limitations of this case study may involve the absence of experiments to further elaborate a more accurate relationship between player engagement and the world-building of *Plants vs. Zombies*. Additionally, the tagging and analysis of the Plant Trivia may be partially based on the author's subjectivity. This case study probably established connections between textual and non-textual narratives in tower defense games, providing some insights into the narrative design of game

characters. Future studies may focus on the impact of game character narratives on players' emotions.

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Conflict of Interest

The authors declare no conflict of interest.

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An Analysis of the Application of Framing Theory in “Violent” Short Video News: A Case Study of Observer Network

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Abstract

The “violence frame” is a variant of the traditional “news frame” in the context of short video news. In terms of media effectiveness, it emphasizes and amplifies themes and semantics related to violence within reports, thereby creating an intense sense of dynamism and tension that captivates the audience’s “strong gaze.” It has significant framing effects in drawing audience attention and evoking emotional resonance. However, it also suffers from evident shortcomings, such as being one-sided, sensational, neglecting factual accuracy, distorting the news structure, and propagating media-induced social anxiety. Thus, how to utilize the “violence frame” to communicate specific events in short video news warrants further discussion.



Full Text Article



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Keywords: Short video news; news framing; online communication; violent event reporting

Introduction

In the era of mobile internet, the forms and content of information dissemination have exhibited unprecedented diversity and immediacy. Users not only demand enhanced visual experiences but also seek a sense of realistic engagement akin to “being present on the scene” (Xu, 2015). Against this backdrop, short video news has emerged as an extremely popular form of communication. This innovative mode of content distribution was developed to meet the audience’s strong demand for the immersive quality of news in the era of online communication. It satisfies the efficiency of information delivery while catering to users’ viewing preferences.

Short video news encompasses nearly all the characteristics of short video dissemination. Firstly, it is characterized by its rapid pace and high degree of fragmentation. Typically, it uses a few seconds of audio-visual montage to outline the key scenes of a news event and extrapolate relevant news topics. This format not only enhances the efficiency of information dissemination but also leverages the strong appeal of visual symbols. Secondly, the dissemination method of short video

news is heavily influenced by its origins in “entertainment videos,” enabling it to quickly capture the audience’s attention within the fragmented environment of online communication. This mode of transmission, which aligns closely with the fragmented cognitive patterns of audiences exposed to an overwhelming amount of online information, can swiftly mobilize audience emotions through carefully designed news agenda-setting, eliciting their interest and attention toward related events (Liu, 2010). The broad impact of this medium makes it an indispensable area of study in modern communication research.

However, despite its remarkable advantages in dissemination efficiency and audience engagement, the dissemination logic of short video news differs significantly from that of traditional media. In the online communication environment, media outlets must not only process news information rapidly but also distill its deeper meanings through comprehensive reflection, ultimately constructing the core topics of news within a certain frame (Liu, 2017). This framing is not only a manifestation of media’s communication ideology but also an essential means of conveying complex information to audiences within a limited timeframe.

This paper will use the “2022 French May Day demonstrations” as a case study to deconstruct the framing mechanisms of a short video news piece published by Observer Network (hereafter referred to as “Guanwang” in mandarin pinyin). By integrating methods of news planning and short video editing, this paper will dissect the specific framing strategies employed by online media in reporting socially contentious events through short videos. Furthermore, the study will analyze how these framing strategies stimulate public emotions and influence public opinion trends, ultimately exploring the roles and limitations of short video news within the modern communication environment (Zhang, Wei, & Wu, 2022).

Theoretical Review and Research Design

(1) Overview of Framing Theory

Framing, as a scholarly concept for examining human cognition and communication behavior, has two origin lines: Bateson’s “meta-communication” and Goffman’s “cognitive structure” (Goffman, 1974; Miller, 2007). The American scholar Lori Dorfman (2001) argued that the practical application of frames by media is analogous to the three levels of conceptual categorization in news construction: overarching values, general issues, and core substance (Zhao, 2021). Accordingly, frames can be categorized into three levels: value frames, event frames, and detail frames (Entman, 1993). Gitlin (1980) proposed a mechanism in which news producers process information through selection, omission, and emphasis. Expanding on this, Entman (1993) noted that news frames appear “natural” on the surface, often blending indistinctly into texts, and can only be fully revealed through systematic comparisons of narrative methods (Liu, 2010).

Entman identified four factors that contribute to constructing prominent frames:

- Agency: The agent, person, or institution responsible for the news event.
- Identification: The cues and classifications associated with the identity attributes of participants.
- Categorization: The process of classifying the news event into categories of specific nature, often labeled.

- Generalization: Explaining the essence of a news event in general terms (Entman, 1993).

In summary, news framing is not only the interpretative routine used by media organizations in reporting issues but also the path through which audiences rapidly recognize, decode, and categorize information, shaping intrapersonal communication on a psychological level (Scheufele, 1999).

(2) Definition of the “Violence Frame”

A news frame is a theoretical and conceptual framework used to organize and present news reports. It encompasses diverse types, angles, and styles of reporting. Based on the preceding analysis, framing is an inherent principle and strategy that news media employ to selectively process news facts. It also serves as one of the cognitive schemas for audiences to interpret media information (Iyengar, 1991). It can be inferred that frames with different qualifiers are extensions of the foundational framing theory concept, adapted by communicators and audiences to achieve specific transmission and interpretation objectives by adding emotional or subjective inclinations.

“Violence” serves as a symbolic construct that can explain specific real-world behaviors or function as an abstract semantic concept in psychological and emotional dimensions of interpretation. Simultaneously, “violence” is also a gesture, embodying the symbolic significance of resistance and conflict through physical actions of individuals (Fahmy, 2004).

By definition, the “violence frame” is a refined branch of framing, situated within the domain of violence, and represents the application of framing through subjective treatment involving emotions and intentions. News reports employing the “violence frame” often feature highly dynamic, tense, and even sensationalized content. Common manifestations in media coverage of various social events include:

1. Direct depictions of violent scenes (e.g., riots, disasters, wars) in news content.
2. Highlighting the inherent violent contradictions within social events by selectively focusing on violent themes and emphasizing the intractability of events, thereby amplifying the violent atmosphere.
3. Using suggestive headlines and commentary to evoke associations with “violence-related themes and semantics” in news events, prompting audiences to interpret their personal situations with conflicting perspectives rooted in the context of the news (Iyengar, 1991).

The violence frame typically relies on specific, widely contentious, and emotionally charged social events. Civic issues, especially those involving conflict-laden topics, serve as key anchors for such framing (Gross & Aday, 2003). Civic and political news, due to its distinctive nature, has a strong emotional connection with audiences, making it a primary focus for violence frames.

In essence, the “violence frame” is a specific type of extended media and news frame. In terms of media effectiveness, it emphasizes and amplifies violence-related themes and semantics within reports, thereby creating intense dynamism and tension that captivate the audience’s “strong gaze” (Fahmy, 2004).

Regarding its characteristics, the content focus of the “violence frame” prioritizes the violent themes and semantics in reports. By showcasing violent scenes and stressing the intractable nature

of events, it draws the audience's attention. Compared with the objective, multi-angled presentation required by "news frames," the violence frame tends to emphasize emotional and subjective expressions, aiming to generate emotional resonance between news events and audiences through dramatic portrayals (Scheufele, 1999). Additionally, the violence frame crafts a high-tension atmosphere by outlining conflicts and tensions in scenes and employing specific headlines and commentary. It prioritizes tone framing over causal framing, intentionally omitting some attributive news details to facilitate the construction of emotional scenarios.

Literature Review

Framing theory in contemporary communication and journalism research has gradually expanded from the traditional media environment to the digital and networked multimodal communication context, reflecting an intertwined evolution of theoretical exploration and practical application. In recent years, as communication technologies and media environments have undergone rapid transformation, scholars have begun to reassess the applicability and limitations of framing theory, particularly its extension into emerging media forms such as online communication and short video news.

In traditional framing theory, media construct specific news frames through the selection, arrangement, and emphasis of information, providing audiences with a pathway to comprehend events. However, in the networked communication environment, the construction and dissemination effects of media frames have undergone significant changes. Some scholars argue that platforms like short videos and social media have reshaped the expression of frames through highly visualized and symbolic forms, making them more emotional and fragmented (Fahmy, 2020). This shift not only amplifies the appeal of frames but also exacerbates audiences' tendency toward superficial cognition. For instance, van Dijk (2018) highlights that the algorithmic mechanisms of digital media, by amplifying the exposure of specific topics, have made news frames increasingly susceptible to environmental control, thereby diminishing their original objectivity. This perspective is noteworthy as it underscores both the functional expansion of framing theory and its latent issues in the new media era.

Simultaneously, the multimodal characteristics of news frames in network communication have become increasingly evident, with the importance of visual frames in the dissemination process gaining recognition and investigation. Rodriguez and D'Angelo (2017) argue that visual frames, through the composition, color, and emotional elements of images and videos, can directly influence audiences' emotional responses to news events. This view is supported by other studies, such as those by Scheufele and Tewksbury (2007), who contend that emotionalized visual frames significantly enhance the dissemination effect of news but may also lead to emotional polarization and biased judgments among audiences. This discussion of the tension between emotional appeal and cognitive depth offers a new dimension for framing theory research: how to balance these elements within news frames.

Moreover, research on the interactivity of frames reflects the dynamic nature of framing theory in the digital age. In traditional media, frames are primarily constructed by journalists and media organizations. In contrast, in online communication, audiences redefine and disseminate news

frames through comments, shares, and other forms of engagement (Matthes, 2020). This phenomenon demonstrates that news frames are no longer unidirectional constructs but outcomes of multi-actor interactions. This shift weakens media control over frames while expanding the diversity of dissemination. This aligns with Entman's (1993) classical framing analysis, which posits that the power of frames lies in their ability to guide public understanding of events cohesively—a capacity that networked communication potentially disperses.

When exploring the evolution of framing theory, the unique role of short video news in the dissemination process cannot be overlooked. With its rapid pace, direct content, and strong emotional impact, short video news offers a novel experimental setting for the application of framing theory. Fahmy (2020) notes that conflict frames in short video news can significantly enhance dissemination effects but also risk distorting complex events and misleading audiences due to their oversimplification. Such critiques prompt researchers to consider whether news frames in this medium require stricter norms to address the challenges of fragmented information.

Methodologically, framing theory research in social and theoretical news reporting exhibits diverse development trends. Content analysis remains a primary tool, particularly effective in comparative analysis and textual deconstruction. For example, Zhao Qingyuan's comparative study of rhetorical frames in livelihood and tourism news from China and the U.S. reveals the impact of cultural contexts on frame construction (Zhao, 2021). Meanwhile, case studies offer in-depth support for framing research on specific events. Liu Dayong's analysis of extreme social event reporting examines how framing deviations can provoke emotional agitation and influence public opinion. Driven by new technologies, statistical analysis has gained prominence (Liu, 2010). Zhang Yue's model-based study integrates audience emotion analysis to quantify the impact of different news frames on audience attitudes and emotions, providing more precise empirical support for framing theory (Zhang, Wei, & Wu, 2022). Additionally, the rise of multimodal analysis and experimental methods has expanded the boundaries of framing research. The former combines text, images, and videos to decode the construction logic and dissemination effects of news frames, while the latter simulates the cognitive and emotional impacts of frames in immersive communication environments using technologies like virtual reality. The integration of these diverse methods has enabled framing research to evolve into a more systematic and nuanced theoretical toolkit, offering a comprehensive perspective for understanding the construction logic and social effects of news frames.

In summary, framing theory's application in the digital era not only broadens the research scope of communication studies but also provides theoretical guidance for media practices. However, the theory faces challenges posed by evolving communication technologies and media ecosystems. Questions such as how to balance emotionalization and rationalization in frame construction and how to ensure the authenticity and integrity of multimodal frames pose higher demands on academic research and media practices. The significance of studying this paper's theme lies in analyzing the manifestation and dissemination effects of the "violence frame" in short video news, thereby contributing empirical evidence to refine the application of framing theory in the networked era and offering improvements for news editing practices in the digital media environment.

Research Design

This study employs a combination of research methods to comprehensively analyze the application of the “violence frame” in short video news and its dissemination effects. First, the study uses literature analysis to review the academic background of framing theory, clarifying the definition, characteristics, and applicability of the “violence frame” in the context of short video news. Second, in the case analysis phase, the content deconstruction method is applied to perform a shot-by-shot analysis of a short video news piece published by Observer Network. This detailed deconstruction examines the composition of visuals, narrative logic, and textual information, revealing how these elements collectively construct the “violence frame.” This approach effectively uncovers the specific techniques short video media employ in their storytelling to create high-tension atmospheres through tone, emotional elements, and symbolic expressions.

Furthermore, the study utilizes Python web scraping tools to extract 3,926 comments related to the short video from the Bilibili platform. By identifying the most popular keywords and discussion topics in the comment section, the study conducts keyword analysis and text classification to quantify audience emotional responses to the video and their dissemination tendencies. This process verifies the effects of the “violence frame” in a specific communication context. The integration of quantitative and qualitative methods enhances the reliability of the research.

The research design integrates three dimensions—literature, case studies, and data analysis—by combining multiple methodologies to comprehensively present the manifestation and dissemination effects of the “violence frame” in short video news. This design not only provides empirical support for the application of framing theory in the new media environment but also offers practical suggestions for improving the use of news frames in media practice.

Empirical Analysis

(1) Presentation of the “Violence Frame” in Short Video News

According to a report by the Associated Press on May 2, 2022, tens of thousands of people marched in various European cities on May Day to commemorate International Workers’ Day and urge governments to provide more support for laborers. Historically, May Day has been the peak period for the rise of socialist ideologies and left-wing movements in Europe. Influenced by the impact of the COVID-19 pandemic on the labor and employment markets, the demonstrations in Europe on May Day 2022 were more fervent and intense compared to previous years. A report from China Daily on May 3 noted: “May Day in Europe is usually a time when workers’ emotions run high. Over the past two years, protests by workers were curtailed due to the pandemic.” France, with its long-standing social and cultural tradition of demonstrations and workers’ strikes, exhibited the most radical and turbulent behavior among European nations during the 2022 May Day events. These factors, rich in news value, naturally made the French demonstrations the primary focus for media coverage of May Day activities.

Regarding the French May Day event, Observer Network (Guanwang) published a written report on May 2, 2022, titled “France’s ‘May Day’ March of 110,000: Violent Clashes in Paris, 54 Arrested”. On the same day, it released a short video news piece on its Bilibili self-media account

titled “Massive Protests Erupt on France’s May Day, Demonstrators Clash with Police in Paris”. The video, lasting 37 seconds, prominently featured violent street confrontations, complemented by bold yellow headlines that delivered a striking visual impact at first glance. This paper deconstructs the presentation of the “protest frame” in the short video using Entman’s four “salient elements” of framing theory (Miller, 2007).

1. Agency Attribution

The short video news piece by Guanwang was based on its written report but selectively extracted violent segments from the May Day demonstrations, emphasizing the violent aspect of the event rather than providing a comprehensive depiction of its broader social context. Compared to the written report’s descriptive language, the short video used captions such as “Violence Continues Unfolding in Paris” and added quotation marks around the term “May Day” as a symbolic gesture, suggesting a sense of mockery and satire (Lin, n.d.). Through this rough and provocative editorial approach, the video presented an image of May Day in France as a highly polarized event rife with overlapping conflicts.

Despite the audience’s lack of complete understanding of the event’s background, the display of violent acts by the agents in the video enables viewers to draw their own interpretations through hypertextual references to reality (Gan & Dong, 2013). The emotional connection elicited by such a framing strategy creates an instant impact that traditional news reports are often unable to achieve in framing applications.

2. Identification

The fragmented and jumpy design characteristics of short video media justify the frequent use of shaky and logically tenuous jump cuts in short video news. In the Guanwang example, numerous visuals of citizens fighting each other and fire-laden scenes were paired with captions like “Violence Continues Unfolding on Paris Streets; French Interior Minister Darmanin Strongly Condemns Protesters.” These combinations of language and visual information create a compelling impact, leading audiences to form clear impressions of confrontational roles in the violent activity.

Viewers are inclined to associate the visuals with simplified identities, such as “thuggish citizens” versus “dedicated police officers.” The crude selection of visual content amplifies the perception of violence, making it easier for online audiences to resonate and empathize emotionally. However, as cross-cultural exchange and media literacy among audiences improve in the information age, the media’s coarse and biased identity guidance (Liu, 2006) can spark debates in comment sections over the authenticity of events. The editorial approach used by Guanwang is particularly intriguing: while guiding the audience toward a harsh critique of opportunists destroying public property, it simultaneously provokes others to question the rights of workers and the truth behind the protests. Such polarized discussions in the comment section amplify the short video’s virality, strategically boosting its popularity.

3. Categorization

According to Lori Dorfman's framework classification theory, news frames can be categorized into value frames, event frames, and detail frames based on the conceptual levels of message construction in news. Detail frames, which are closely tied to the essence of the problem, often rely on expressive language that emphasizes "detailed depictions" to categorize the subject of the news into specific attributes.

In the Guanwang case, phrases like "110,000 Protesters," "Violent Demonstrators," and "Fifty Arrested" appeared multiple times during the short video, with high temporal prominence (as shown in Table 1). However, these detailed and descriptive keywords served merely as transitional captions for interpreting the visuals rather than directly contributing to the narrative. Nonetheless, the media leveraged the "power of visuals" to frame the event as premeditated, violent, and illegal from a moral standpoint. Driven by the "violence frame," this categorization process further intensified audience emotions from a singular perspective. At the same time, it risked fostering public prejudice and misunderstanding. Compared to traditional textual frames, this approach leads audiences to adopt more oversimplified, extreme, and one-sided views on protests and conflicts, amplifying the subjective dissemination of "violence."

4. Generalization

The construction of news frames typically involves two layers. The first is delimitation, which determines the scope of news material and employs selection strategies to emphasize or highlight particular facts or attributes. The second layer is internal structure, which reorganizes selected content elements into a coherent narrative, constructing the complete meaning of the news text.

In short video news, where the format limits the inclusion of extensive textual content, visual captions, background music, and video editing measured in seconds and frames become key tools for implementing reorganization strategies. In the Guanwang case, metaphorical headlines and captions, ambiguous yet visually stimulating elements, and suspenseful music collectively highlighted extreme, violent, and conflict-laden symbolic motifs (Suo, 2016). Purely video-based news discards the "textual imagination" of traditional formats. Instead, its shot composition is designed to maximize audience engagement with public issues as passive spectators, immersing them in a "violence frame" constructed by successive dramatic visuals rather than encouraging critical discussion.

Scene No.	Camera Shot	Visual Content	Filming Technique	Duration	Audio	Narration
1	Wide Shot	A large group of people in black vandalizing	Horizontal panning, repetitive footage	7s	Background music, crowd shouting	On May 1st local time, France witnessed May Day

		stores				demonstrations, with over 110,000 people participating across cities like Paris.
2	Medium Shot	Disorderly crowd looting supplies, police hitting protesters	Handheld panning	3s	Background music, sound of running	Violence erupted on the streets of Paris as the demonstrations began.
3	Long Shot	A group setting fires in the streets, flames spreading	Handheld zoom-in	3s	Background music, sound of fighting	None
4	Medium Shot	Several individuals fighting	Shaky handheld	3s	Background music, sound of fighting	None
5	Wide Shot	A large number of police deploying tear gas	Zoom shot	5s	Background music, sound of fighting and flames	Approximately 5,000 police officers were deployed in Paris to maintain order and arrest suspects.
6	Long Shot	People fighting with weapons amidst smoke	Handheld	8s	Background music, sound of fighting and flames	The French Interior Minister Darmanin condemned the violent events in Paris, pledging support for law enforcement to maintain public order. Eight officers were injured, and the Paris police condemned attacks on firefighters.

7	Long Shot	(Unspecified)	Handheld	6s	Background music, sound of running and fighting	As of the evening of May 1st, 50 arrests were made in Paris, according to the Paris police.
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Table 1: “Observer Network’s” Short Video Report on the French May Day Workers’ Movement - Scene Analysis

(2) The Logic Behind the Use of the “Violence Frame” in Short Video News

With guidance from the basic presentation form of the violence frame, the media must further combine the selected news elements under “framing” logic to achieve the editor’s intended communication effects at the audience level. In traditional journalism, text-based narratives in print media served as the primary vehicles for framing, with “text” as the main medium of expression in both print publications and pre-information era broadcasting systems. However, in the age of online communication, framing expressions have undergone significant changes in the context of mobile, lightweight, small-screen, and fragmented media environments. These changes are partly attributed to innovations in multi-scenario, on-site reporting styles and partly to audiences’ new demands for receiving news texts empowered by technological advancements. Overall, these transformations result from the continuous evolution of mass communication in the online environment. The “violence frame,” with its inherent emotional “cultivation,” strong stimulation, urgency, and controversial nature, aligns with public expectations of the media’s role in “democratic” discourse in the internet era. It has thus developed its own logic for narrative influence. Observing the short video news case from Observer Network, three prominent patterns of the “violence frame” are evident:

1. Direct “Violence” to Capture Audience Attention

Direct violence employs visual and auditory multimedia elements to create an immediate sensory impact on the audience through multi-scenario editing formats in integrated media applications. In the analyzed case, visual elements of violence—such as looting, arson, and fighting—occupy 20 seconds of the video’s duration. This content delivers a strong and immediate impression, providing intense and direct shocks to the audience. Combined with emotionally charged background music, the visuals effectively amplify the perceived severity of the event and trigger curiosity-driven interest in the footage, establishing a strong first impression that lays the foundation for the video’s dissemination.

2. Indirect “Violence” to Evoke Audience Empathy

News narratives utilizing the violence frame often appear in media with overt editorial stances and topics aligned with mainstream societal consensus on controversial events, such as France’s

May Day demonstrations. The Observer Network capitalized on short video media to report on a narrow aspect of the entire demonstration, explicitly presenting violent resistance as the core narrative. This portrayal highlights seemingly irreconcilable conflicts between the event's participants. The report indirectly exposes Europe's internal social unrest and chaotic order, effectively critiquing Europe's "systemic institutional violence" through the lens of direct violence.

Referring to the original report from China News, it becomes evident that the short video selectively integrates only the most extreme elements of the event. Consequently, the report implicitly labels the majority of French workers with legitimate demands as "rioters." Although this bias poses certain issues, it aligns with the reality of ideological competition, wherein Chinese media are expected to highlight the advantages of China's political system through comparative reporting. It also resonates with mainstream cultural desires to "expose the West," subtly eliciting varying degrees of reflection and empathy among the audience.

3. Grafted "Violence" to Imply Audience Associations

Beyond leveraging mainstream cultural perspectives to maximize the violence frame's dissemination effects, the broader social context in China, including demands for labor reform and opposition to "996" work culture and overwork, has transitioned from subcultural arenas to mainstream platforms, becoming a growing societal consensus. Particularly on short video platforms dominated by younger audiences, criticisms of capitalist exploitation and advocacy for labor rights are increasingly seen as morally correct.

Given this context, the Observer Network's use of media "violence" may invite audience skepticism. However, rather than diminishing the report's effectiveness, such skepticism and critique within interactive and relatively lightly regulated short video media amplify engagement. The feedback in comment sections creates large-scale discussions, where increased participation heightens the video's popularity. Consequently, the report's comment section becomes a secondary topic generator. This engagement triggers algorithmic amplification on the platform: as the comment section gains traction, related videos featuring themes like "workers' movements" and "Marxism" are increasingly recommended.

In the analyzed case, this ripple effect of the "violence frame" connects the radical emotions of France's workers' movement to the inner emotional sentiments of modern laborers, subtly grafting them onto short video viewers. By the time this paper was written, Python web scraping tools had extracted 3,926 comments related to the Observer Network short video, excluding invalid and deleted comments. Keyword analysis of terms such as "anti-capitalism," "workers' rights," "overtime," and "collapse" revealed that 67.9% of the audience expressed critical attitudes toward the report. Neutral attitudes (keywords not identifiable) accounted for 16.9%, while only 15.2% of the audience aligned with the media's framing stance. The three most popular comments, each receiving thousands of likes, were as follows:

1. Username: Arctic Lemming – "Truly the revolutionary heartland."
2. Username: Heihei China Rises – "Workers' rights are earned by themselves."
3. Username: FerrariSF – "It would be odd if France stopped protesting one day."

Through these three core logic patterns, the “violence frame” in short video news effectively builds public discourse in the online domain. Simultaneously, it amplifies integrated communication effects by regulating audience emotions, showcasing the unique communication landscape of the “violence frame.”

Sentiment	Keyword Classification	Percentage
Supportive (93 comments)	Freedom, violence, vandalism, riot, disorder, collapse, “beautiful scenery,” failures, idlers, May Day, armed...	15.2%
Neutral (104 comments)	Comments outside “supportive” and “critical” categories, not included in sentiment recognition statistics.	16.9%
Critical (417 comments)	Against overtime, workers’ rights, revolution, international demonstrations, Paris Commune, demands, support, oppression, vacation, struggle, awakening, comrades, role model for the people...	67.9%

Table 2: “Observer Network’s” Report on the French May Day Workers’ Movement - Public Sentiment and Keyword Analysis

(3) Negative Effects of the “Violence Frame” in Short Video News

Although the inherent advantages of the “violence frame,” such as its strong visual appeal and remarkable ability to evoke audience emotions and influence public opinion, often yield favorable communication outcomes in short video and other online media, it also faces significant limitations. In an era that emphasizes journalistic professionalism and media responsibility, the “violence frame” is not suitable for extensive application across diverse societal issues. Its associated media biases and reporting tendencies prominently reflect subjective editorial judgments, which hinder the accurate representation of news facts.

On one hand, as discussed earlier, the “violence frame” subtly amplifies audience emotions during the dissemination of major social events. However, the constraints of short video media—characterized by their brevity—limit the ability to channel these heightened emotions through comprehensive analysis and discussions of solutions. Instead, media often build montages of “violent” imagery without providing audiences with explanatory sources, leaving them in a state of frustration and uncertainty.

On the other hand, the subjective portrayal of facts within the “violence frame” on online platforms frequently invites sharp audience criticism and skepticism. While such heated discussions can significantly boost the visibility of media reports in interactive online environments, they simultaneously risk undermining the media’s credibility. This effect is particularly pronounced in reports on news topics closely related to public livelihoods, such as labor movements. Audience interpretations are influenced by societal hotspots, such as immigration, unemployment, and workplace burnout (“neijuan”), which are critical factors in decoding individual information. In this

context, the public media's use of the "violence frame" can extend audience emotions toward questioning government policies, potentially leading the "collective public media institution" into the "Tacitus trap"—a loss of credibility harmful to fostering positive social narratives and strengthening national image.

If the "violence frame" is overused in short video news, it is likely to cause more profound and lasting negative effects:

1. Extreme Sensationalism Supplants Rational Public Cognition

The violence frame emphasizes connections and associations, often exploiting the contradictions between stakeholders in contentious social events. In the case of Observer Network, extreme acts of violence within the news event were exaggerated using highly sensational language and expressive strategies in the short video. This approach risks distorting public understanding of news events, fostering partial interpretations that are detrimental to cultivating rational public cognition.

2. One-Sided Depictions Create an Extreme Public Opinion Climate

Overuse of the "violence frame" in short video news inevitably embeds "violent thinking" into the entire editorial process, from topic selection to content presentation. This framing strategy results in videos overloaded with illogical violent elements while emphasizing binary opposition and unresolvable conflicts. Consequently, these reports propagate negative emotions in society, fueling extreme social psychology and the spread of antagonistic attitudes.

In the analysis of comments on the Observer Network case, numerous user remarks reflecting skepticism or thematic emotional projections reveal such tendencies. By amplifying the perceived intractability of social issues like "worker demands," the "violence frame" stokes feelings of imbalance and inferiority among specific audience segments. Under continuous psychological reinforcement, these emotions may escalate toward extreme, even violent, outcomes.

3. Endless Competition for Traffic Dilutes Media Accountability

The "violence frame" allows media outlets to attract audience attention through visually shocking and sensational content. While this initially offers competitive advantages in the race for online information traffic, overuse of this frame risks diluting the media's sense of responsibility. It provides opportunities for unchecked exploitation of violent elements, such as depicting acts of looting or irreconcilable conflicts, to stimulate audience interest in sensational content.

This trend often involves oversimplifying complex news stories and disregarding objective truths. By focusing on superficial violence to capture attention, media outlets increasingly shift their reporting focus away from meaningful, nuanced narratives.

Recommendations for the Use of the "Violence Frame" in Short Video News

How media recognize and use the “violence frame” appropriately, guide social cognition under the framework of network communication, foster a positive public opinion environment, and critically examine the issues arising from its application are essential for building a harmonious society and promoting a healthier, more rational development of the network communication landscape. This article provides the following recommendations for the application of the “violence frame”:

(1) Adhering to the Principle of Balanced Reporting in the “Violence Frame”

Media should prioritize balanced reporting by dismantling simplistic understandings of the “violence frame” as merely an accumulation of violent elements. Regardless of the type of report, media must avoid overemphasizing negative narratives and illogical polarizations. Instead, it should objectively identify the key actors in news events, introduce mechanisms for guiding the analysis of these events, and expand the traditional fragmented and singular content dissemination model of short videos. Balanced reporting ensures a more comprehensive and multi-dimensional representation of news, helping audiences form nuanced and informed perspectives.

(2) Combining “Objective Frames” for Rational Communication

The case analysis of the Observer Network’s short video report on the May Day labor protests highlights that the media’s framing biases within the “violence frame” can significantly influence audience emotions on multiple levels. In the post-truth era, audiences, compared to those in the traditional internet age, are increasingly empowered by access to networked knowledge and shaped by varying social and cultural contexts. This has led to more subjective and profound interpretations of media-provided news (Lin, n.d.). In the case study, this empowerment partly explains the strong critical responses from audiences.

Thus, media should respect objective facts and strive to avoid extreme “violence frame” narratives that primarily serve to incite emotions (Zhang, Wei, & Wu, 2022). Instead, news reporting should integrate objective frameworks to ensure rationality, maintaining the balance and authenticity of reporting while upholding the media’s social responsibility. On the basis of goodwill, media should guide public opinion toward constructive discourse and adhere to factual balance (Liu, 2010).

(3) Developing a Mature Ethical Model for the “Violence Frame”

Journalistic ethics represent the value orientation and daily practices aligned with societal moral conventions that news media must observe during their activities. Media reporting practices should be regulated by these ethical standards. However, short video news reporting under the “violence frame” currently lacks mature reporting models and ethical guidelines. This ethical vacuum is a primary cause of the frequent deviance in media “violence narratives” and intense competitive behaviors among media outlets.

Media professionals must consciously assume their roles in environmental monitoring and public opinion oversight, establishing industry standards for the use of the “violence frame” in network communication. Additionally, injecting a sense of humanistic care into news reports is vital (Liu, 2010). Exploring a mature ethical guideline for reporting within the “violence frame” will help mitigate sensationalism and foster responsible journalism practices, ensuring that news reports contribute positively to societal discourse.

Conclusion

Although the “violence frame” has existed in various forms throughout the history of media reporting due to its inherent inevitability within the framework of mass communication, it remains a cornerstone of innovative network thinking in emerging news production and distribution driven by internet-based communication logic in the information age. When applied appropriately, the “violence frame” can uncover the latent value of news topics from multiple dimensions, such as audience engagement and the distillation of newsworthiness. It stimulates intense discussions around public opinion while delivering impactful “violent imagery” to audiences, leveraging the networked effects of online news dissemination.

However, excessive or irrational use of the “violence frame” risks pushing media toward overly subjective reporting, inflating emotional bubbles during societal transformations, and encouraging voyeuristic and entertainment-driven audience psychology. Such tendencies undermine journalistic professionalism and rational public discourse.

The harmonious development of short video news hinges on constructing a holistic approach to online communication that balances the scientific media perspectives of communicators, the psychological needs of audiences, and the objective elements of news. This approach can counteract the negative attributes of short video media amplified by the “violence frame.” Therefore, media must continuously explore logical and standardized uses of the “violence frame” in short video news reporting, exercise caution in overemphasizing conflict and contradictions, and actively provide space for rational audience reflection.

Moreover, it is crucial to weave rational connections among audiences from diverse cultural backgrounds, fostering thoughtful engagement with the emotions evoked by news. The ultimate goal should be to exert more positive and insightful influence on society, ensuring that media achieve both optimal communication outcomes and significant public benefits through the responsible application of the “violence frame.”

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Conflict of Interest

The authors declare no conflict of interest.

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Research on the Multidimensional Value and Communication Practice of Adolescent Sex Education in China

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Abstract

Objective: To explore the multi-dimensional value and communication practice of adolescent sex education in China. Methods: Study the overall teaching and cultural differences of sex education and discover the educational value of teenage sex education in gender equality, physical and psychological development, laws and regulations. Results: Multiple practical approaches based on community education, family education, school education community education and media communication are proposed. Among them, community education can provide sex education services for teenagers through community activities, community organizations and community resource integration; family education can promote youth sex education through parent participation and parent-child communication; school education can improve the quality of youth sex education through curriculum, teacher training and school resources utilization; media communication can convey accurate and scientific sex knowledge through radio, television, Internet and other media channels about sex education. Conclusion: This paper provides multi-dimensional arguments and practical ways to implement adolescent sex education in China and provides a reference for the formulation and implementation of relevant policies.



Full Text Article



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Keywords: Youth, Sex Education, Multi-dimensional Values, Communication Practice

Introduction

Adolescent sexuality education, as one of the important educational fields [1], involves the value of multiple dimensions such as society, health and education, and is of great significance to the growth of individual adolescents as well as to the public affairs of society. Li Hongyan, an expert in 2020, was interviewed by China News Agency.

Li Hongyan pointed out in an interview with China News Agency in 2020 that comprehensive sexuality education has positive significance in promoting sexual and reproductive health

(prevention of sexually transmitted diseases and AIDS), ensuring safety (prevention of sexual and gender-based violence and bullying), promoting gender equality, and developing socio-emotional competence, etc. [2]. The issue of sex education itself is a topic of great cultural and social significance, involving comprehensive issues in multiple fields such as gender equality, physiological and psychological development and law.

By synthesising relevant studies at home and abroad, we find that adolescent sex education has important social, health and educational values in multiple dimensions [3]. In terms of gender equality, sex education can promote gender equality, eliminate gender discrimination, and lay the foundation for the social development of gender equality [1]. In terms of physiological and psychological development, sex education can help guide adolescents to correctly understand their bodies and psychology, and to form healthy and positive personalities and attitudes [4]. In terms of laws and regulations, sex education helps adolescents treat sexual and emotional issues by the law and improve their legal awareness and legal literacy [5].

In order to effectively implement adolescent sex education, this paper proposes a multifaceted practical approach based on social education, family education, school education and media communication. It helps to provide theoretical support and practical guidance for the implementation of sex education for adolescents in China and provides a reference for the formulation and implementation of relevant policies.

The current situation and challenges of adolescent sex education in China

Chen Jing's 2015 article, 'Analysis of China's Sex Education Policies from 1978-2014,' summarised that according to different time stages and the specific content of policies and regulations, China's adolescent sex education can be broadly divided into three major phases: sexual hygiene education oriented towards physiological knowledge (1978-1994), sexual health education oriented towards social issues (1995-2006), and sexual relations oriented Sexual safety education (2007-2014) [6]. Evolution to the present-day China entered sexual and reproductive health education (2011-2020), the current implementation of adolescent sexuality education in China is an important issue. In this paper, we will analyse and discuss the current implementation of adolescent sexuality education and the existing problems from various aspects [7-20].

1. Current Implementation of Sex Education for Adolescents

At the social level, the 'Healthy China 2030' Programme clearly states that sexual health education and intervention for key groups such as adolescents should be strengthened and that the mental health of adolescents should be improved. However, there are differences in actual implementation. On the one hand, economically developed and coastal regions and schools attach greater importance to and accept sex education for adolescents, and have actively taken various measures to promote it, including the development of specialised curricula and the training of professional teachers. On the other hand, remote and inland areas and schools are still lagging and neglecting sex education for young people. At the same time, there is still a bias in the knowledge and understanding of sex education for adolescents, which is often interpreted simply as the

imparting of sexual knowledge, to the neglect of the holistic and comprehensive nature of sex education.

At the educational level, the lack of full-time sex education trainers has led to a lack of professional knowledge and skills among those involved in the promotion of sex education for young people. Teachers lack a systematic knowledge base and professional guidance on sex education for adolescents, which brings certain difficulties to the implementation of sex education for adolescents. The imbalance of educational resources also restricts the implementation of sex education for adolescents. Some districts and schools lack relevant educational resources, such as teaching materials, facilities and teachers, which also makes the implementation of sex education for adolescents difficult.

From the family level. On the one hand, some parents have conceptual barriers to adolescent sex education, believing that adolescents should not receive sex education or that sex education will lead to undesirable behaviours. On the other hand, some parents lack proper guidance and support for adolescent sex education. This has limited the role of family education in adolescent sex education to a certain extent.

2. Major Problems and Challenges Encountered in the Implementation of Sex Education for Adolescents at Present

The closed attitude of social and cultural concepts towards the topic of sex and the cognitive bias towards sex constitute a certain resistance to the implementation of sex education. Some people are sceptical about the need for sex education for adolescents and even stress that sex education will lead to more problems. The constraints of such traditional concepts mean that during implementation, it is necessary to face the pressure and controversy of public opinion.

Sex education for adolescents lacks a systematic and comprehensive nature. Existing sex education for adolescents often focuses only on the impartation of knowledge in certain areas, while neglecting the comprehensive nature of sex education. Sex education for adolescents involves several dimensions, such as gender equality, gender and sexual orientation, knowledge of sexual health, psychosexual development, etc., but the existing content and methods of education often fail to cover all aspects of knowledge and skills.

Sex education lacks a systematic and standardised curriculum and teacher training. At present, sex education in China tends to be fragmented and sporadic, lacking systematic curriculum development and teacher training. The fragmentation of curriculum content and the lack of teacher education have led to a lack of unified guiding ideology and standardised educational methods in sex education, thus failing to effectively improve the quality of sex education for young people.

Lack of family education is also one of the important problems facing adolescent sex education at present. In 2017 a set of teaching materials titled *Sexual Health Education Reader for Primary School Students: Cherish Life* was uploaded on the Internet by certain parents who took screenshots out of context, accusing the teaching materials of abetting, and was ultimately withdrawn as a result. Family is the first classroom of sex education for adolescents. However, due to parents' lack of knowledge and communication skills in sex education, adolescents are unable to acquire correct knowledge of sex, thus increasing their confusion and misinformation about sex.

Media communication is also one of the challenges facing sex education for teenagers. Nowadays, the popularity of new media, such as the Internet and mobile phones, has brought adolescents into contact with a wider and more diversified range of sex information, but the accuracy and scientificity of such information cannot be guaranteed. Some sexual information may be harmful to adolescents, and it is difficult to regulate and control. Information overload and information asymmetry brought about by the dissemination of media pose challenges for adolescents.

To address these problems and challenges, a combination of methods and strategies is needed to promote sex education for adolescents. (1) Social education should be strengthened to provide sex education services for adolescents through social activities, social organisations and integration of social resources; (2) Family education should be strengthened to enhance parents' knowledge and communication skills in sex education to ensure that adolescents can acquire correct knowledge and values about sex in the family environment; (3) School education should strengthen the training of teachers and the standardisation of curricula to improve the quality of sex education; (4) Media communication needs to be effectively regulated to provide accurate and scientific sex knowledge and to avoid the dissemination of harmful information.

Sex education for adolescents faces many problems and challenges in the process of implementation in China, and it is necessary to strengthen the synergistic promotion of social education, family education, school education and media communication to effectively promote the development of sex education for adolescents in China.

Multi-dimensional analysis of the value of the implementation of sex education for adolescents in China

1. Value to the individual growth of adolescents

The World Health Organisation points out that adolescence is an important stage in a person's physiological, psychological and social development, as well as a key period for shaping individual growth.

Sex education can help adolescents establish correct gender concepts and awareness of gender equality. Adolescents are in a period of gender role identity, while gender stereotypes and gender discrimination often exist in society. Through the delivery of sex education, adolescents can understand that the nature of gender is a biologically based difference, and that sexual orientation and gender identity are part of an individual's diversified development, thus contributing to the formation of concepts and attitudes of gender equality.

Sex education for adolescents is also important for the promotion of their physical and psychological development. As adolescents are at a critical stage of physiological development, sex education can provide them with scientific knowledge about physiological changes during puberty and methods of psychological adaptation, helping them to better understand and cope with their own physical and psychological changes. At the same time, sex education can also help adolescents establish positive sexual attitudes and behavioural habits through the transmission of scientific knowledge about sex and mental health counselling, to promote their healthy growth.

Sex education for adolescents also has an important impact on the cultivation of adolescents' legal literacy and legal awareness. During adolescents' development, they are gradually equipped

with legal responsibilities and rights, and the relationship between sex and sexual partners involves legal norms and legal responsibilities. Through the delivery of sex education, adolescents can learn about the relevant laws and regulations, enhance their legal awareness, and avoid behaviours that violate the law, while at the same time protecting their legitimate rights and interests.

2. Value to the public affairs of the community

The introduction of sex education for young people is of great significance to the promotion of gender equality in society. Gender equality is a basic human rights principle, and sex education for adolescents is precisely one of the important ways to help adolescents realise gender equality. The implementation of sex education can help adolescents get rid of the traditional fixed concepts of gender roles and establish the values of respect and equality, thus creating a more equal and inclusive environment for society [21].

The implementation of sex education for adolescents is also of great significance in maintaining social stability and tranquillity. Adolescents are the future of society, and their sexual concepts and behaviours will directly affect the values and moral standards of society. The implementation of sex education can help adolescents establish correct moral concepts, form healthy sexual behaviour patterns, and reduce the incidence of sexually transmitted diseases and the rate of unwanted pregnancies among adolescents, thus helping to maintain social harmony and stability.

Discussion on the communication practice pathway of sex education for adolescents

1. The role of school education

School education is an important part of adolescent sex education in China, and it plays a crucial role in the implementation of adolescent sex education [22]. As a formal education institution, school education has unique advantages and responsibilities with professional teachers and high-quality educational resources.

The role of school education in adolescent sex education is mainly reflected in the curriculum, teacher training and the use of school resources. By designing reasonable curriculum content and teaching methods, schools can provide adolescents with systematic and comprehensive sex education teaching. In terms of curriculum, schools can integrate sex education into various disciplines, so that students can receive knowledge and skills training in sex education in different disciplines and improve their awareness of sex education and sexual morality. In addition, schools can also offer special sex education courses or activities to explain and discuss in detail the key points and difficulties of sex education, to enhance students' knowledge and awareness of sex education.

Schools should also strengthen the training and development of full-time teachers of sex education for young people. Teachers are the main implementers and disseminators of sex education, and their ability and quality directly affect the effectiveness and quality of sex education. Only then can they better provide students with systematic and comprehensive sex education and be able to effectively carry out sex education teaching work. In addition, schools should strengthen the

supervision and evaluation of teachers to ensure the quality and effectiveness of their teaching in sex education.

Schools should also make rational use of school resources to provide comprehensive sex education support for young people. Schools can provide more learning opportunities and communication platforms for adolescents by organising various kinds of sex education activities and providing resources and facilities related to sex education. For example, schools can organise activities such as campus lectures and seminars, and invite experts, scholars and sex educators to campus to give special lectures and training, to provide students with comprehensive and accurate knowledge and information on sex education. In addition, schools can set up a sex education resource bank to collect and organise sex education-related books, materials, videos and other resources for students' independent learning and use.

2. The role of family education

Family education is an indispensable and important factor in adolescent sex education, which promotes adolescent sex education through parental involvement and parent-child communication [20].

Family is the earliest and most important social environment for children's sexual knowledge acquisition and value formation. Family education can provide a safe and open sex education environment for adolescents and guide them to form correct and healthy sexual concepts. Parents can adopt appropriate methods and content for sex education according to the age characteristics of their children. For example, when the age is appropriate, they can tell their children the basic knowledge about physiological development and sex knowledge, helping them to understand their physiological changes and enhance their self-protection ability. In addition, parents can also enhance their intimate relationship through an open family atmosphere and parent-child exchanges, to increase their children's acceptance of sex education. This form of family education can help young people build up their self-confidence, and respect for others and resist negative influences.

3. The role of social media

Complementary to family education is the role of social media. In the present era of advanced information technology, social media such as radio, television, internet and other media channels can not only provide young people with information and knowledge on sex education but also cultivate their correct attitude towards sex. Social media have a wide coverage and strong dissemination power, they can deliver accurate and scientific sex knowledge to all the people who are concerned about sex education for teenagers. Radio and television, as traditional media methods, can deliver relevant information to the public through special programmes on sex education and advertisements on sex education for teenagers. The popularity of the Internet and mobile terminals has made it possible for teenagers to access the content of sex education anytime and anywhere, and this convenience and real-time nature have greatly promoted the popularisation of sex education for teenagers.

Social media can also play the role of a medium, through different forms and contents to guide young people to establish a positive and healthy concept of sex. For example, by broadcasting sex

education episodes in some youth idol dramas and children's cartoons, it can subconsciously help adolescents examine their behaviours and values and learn from them the correct attitude towards sex. Meanwhile, adolescents can also communicate with their peers through social media platforms to share their experiences and confusions, get timely feedback and support, and improve their confidence and self-protection awareness [9].

Social media also brings some challenges and risks. Teenagers are generally more capable of using the Internet, but they cannot discern information and are easily misled by false information and undesirable content. Therefore, the media should also strengthen the regulation of the content of sex education for adolescents, provide accurate and scientific information, and block and deal with undesirable media content to protect the healthy growth of adolescents.

Conclusion

Sex education for adolescents in China has important social, health and educational values in multiple dimensions, such as gender equality, physiological and psychological development, and laws and regulations. To effectively implement adolescent sex education, this paper proposes a multifaceted practical approach based on social education, family education, school education and media communication. It provides arguments and practical ways of multi-dimensional value for the implementation of sex education for adolescents in China.

In order to better promote the development of sex education for adolescents in China, we suggest strengthening the formulation and implementation of policies on sex education for adolescents, improving the interaction and coordination between school education and family education, and advocating the participation and support of all sectors of society. We also call on all sectors of the community to pay more attention to sex education for young people and jointly promote the healthy development of sex education for young people.

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Conflict of Interest

The authors declare no conflict of interest.

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Montage Techniques and Visual Language under German Expressionism

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Abstract

The purpose of this paper is to explore the use of montage technique in German Expressionism and its influence on film art. The study begins with a background on the historical background of German Expressionism and its main influence on film art and montage techniques, highlighting the key position of visual language in artistic presentation. The goal of this study is to analyze how the montage technique strengthens the emotional expression of the film and the importance of the development of film art. Through an in-depth analysis of classics such as *The Cabin of Dr. Caligari*, *The Shadow of Cabiria* and *Metropolis*, the study presents the use of montage in Expressionist cinema to express emotion, and the role of visual elements such as color, composition, symbolism, and metaphor in enhancing the narrative effect. The article summarizes the main findings of the study and explores the innovations of visual language in narrative and emotional expression, covering the importance of Expressionism in montage technique and visual language, and its contribution to the development of cinematic art. It also identifies where the research is flawed and gives directions that future research might explore.



Full Text Article



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Keywords: German Expressionism, montage techniques, visual language, film art, cross-cultural influence

Chapter 1. Introduction

1.1 Background and significance of the study

1.1.1 Background of the study

German Expressionism was an artistic movement that emerged in the early 20th century and had a profound impact on the development of film art, especially in the techniques of montage and visual language. The movement began in pre-World War I Germany, a time of social unrest, when artists relied on Expressionism as a way of venting their inner fears and insecurities. In cinema,

Expressionism gave a strong emotional tone and subjective perspective to films, so that they were no longer mere reproductions of reality, but evolved into a kind of emotional expression and transmission.

The technique of montage is widely used in Expressionist films, in which different shots are skillfully spliced together to create a unique narrative rhythm and emotional tension. The use of this technique makes the movie more and more flexible in terms of narrative, and at the same time gives the audience a richer visual experience [1].

Visual language also plays an important role in Expressionist art. Artists used unique colors, compositions and symbols to build a style of artistic expression with strong visual impact [2]. This visual language not only strengthens the artistic expression of the movie, but also enables the audience to more deeply understand and comprehend the thoughts and emotions conveyed by the movie.

1.1.2 Purpose of the study

The key objective of this study is to explore the use of montage in German Expressionist cinema [3]. By analyzing this technique in detail, we hope to gain a more comprehensive understanding of how montage is subtly integrated into the creative process of Expressionist cinema, thus enhancing the emotional dimension and the depth of the narrative structure of the film. By comparing and contrasting examples of montage in different films, we intend to demonstrate its crucial role in building the atmosphere of the film, shaping the psychology of the characters, and advancing the storyline. This study also aims to explore how the montage technique can be combined with other visual elements of expressionism to create a unique and compelling cinematic language that influences the audience's emotional resonance and deeper understanding of the film's themes [4]. Through this research, this paper expects to give new perspectives and inspiration to the theory and practice of movie art.

1.1.3 Significance of the study

This study is of great significance to the in-depth understanding of the development of film art, especially in exploring how German Expressionism brought new vitality to film art. By analyzing the influence of Expressionism on montage techniques, this paper can more comprehensively recognize the unique role of this artistic genre in enhancing the emotional expression and narrative effect of films. This study also emphasizes the importance of visual language in artistic creation, which is not only a medium for conveying emotions and ideas, but also a key factor in constructing the unique visual style of a film.

More importantly, this study provides valuable insights for contemporary movie creation. Today, with the rapid development of digital technology, the art of film is undergoing unprecedented changes. By reviewing and analyzing the classic examples of German Expressionist cinema, modern filmmakers can draw inspiration from them, combine the essence of traditional art with modern technology, and create richer and more diverse cinematic works. This will not only help to promote the continuous innovation of movie art, but also let the audience enjoy the visual feast and feel the deeper artistic shock and emotional resonance.

1.2 Content and methodology of the study

1.2.1 Content of the study

The core research of this thesis focuses on three levels. The first is to analyze the core characteristics of Expressionism, which include the strong display of emotion, the distorted presentation of reality, and the highlighting of the artist's subjective perspective [5]. Expressionism is not only an art style, but also a unique interpretation and re-shaping of reality.

The second is to explore in detail the definition of montage technique and its application examples in movies. Montage, as an important tool in film editing, creates a unique narrative rhythm and emotional flow through the combination and splicing of different shots. This study analyzes how montage strengthens the narrative effectiveness and emotional expression of a movie with the help of specific movie examples.

The third is to study the way visual language is presented in Expressionist films. Visual language includes the use of color, compositional techniques and symbolic elements, etc., which are closely related to the montage technique, and together construct the unique visual style and emotional tone of the film. This study aims to reveal how these visual elements work together to create a profound and unique artistic experience for the audience.

1.2.2 Research methodology

This study will adopt a variety of research methods to ensure a comprehensive and in-depth investigation of the montage technique and visual language in German Expressionism. Among them, literature analysis will serve as the basis for systematically organizing domestic and international research materials on German Expressionism, montage theory and film visual language, so as to extract the key theories and ideas and provide theoretical support for this study. Case studies of films are the core of this study. Classic Expressionist films such as *The Cabin of Dr. Caligari*, *The Shadow of Cabiria*, and *Metropolis* will be taken as the objects of analysis, and the use of montage and the characteristics of visual language will be analyzed in depth. Visual art analysis will also be used as an important tool, using professional visual analysis tools and methods to carefully interpret the color, composition, light and shadow, and other visual elements of the film, in order to reveal the artistic expression and emotional transmission mechanism behind [6]. Through the comprehensive application of these methods, this study strives to explore the value and significance of montage techniques and visual language in modern film creation under the premise of in-depth understanding of German Expressionist film art.

1.2.3 Literature review

Before exploring in depth the montage techniques and visual language under German Expressionism, a comprehensive review of the existing literature is indispensable. By carefully combing through relevant academic works, journal articles and online resources, it can be found that German Expressionism, as a unique art style, has been particularly influential in the field of cinema. Many scholars have analyzed the use of montage in Expressionist films from different

perspectives, pointing out that it strengthens emotional expression and narrative rhythm through editing techniques.

In terms of visual language, existing studies have also demonstrated the ingenious use of color, composition and symbolic elements in expressionist films [7]. These elements, combined with montage techniques, work together to shape the unique visual style of the film and bring a profound artistic experience to the audience.

Despite the wealth of research findings in the existing literature, there are still a number of issues that deserve further exploration. For example, how the montage techniques and visual language of expressionist cinema specifically affect the cognitive and emotional responses of the audience, and how these techniques are inherited and developed in contemporary cinema. Therefore, this study aims to fill these research gaps and contribute new perspectives to the study of German expressionist film art.

Chapter 2 Overview of German Expressionism

2.1 History and Characteristics of Expressionism

2.1.1 Origins of the art movement

German Expressionism originated at the beginning of the 20th century, and was a comprehensive art movement involving various fields such as art, literature and cinema. From 1910 to 1930, the movement reached its zenith, not only creating new horizons in artistic creation, but also triggering profound changes in aesthetic concepts. The core of Expressionism was to emphasize the free expression of personal feelings and a unique interpretation of the real world. Through exaggerated techniques, distortion of forms and bold use of color, artists broke through the boundaries of traditional art to create a strong and subjective visual experience. In the field of painting, this characteristic is particularly significant. For example, the core qualities of Expressionism are displayed in the works of Italian painter Giorgio de Chirico and German painter Max Beckmann. Their paintings were not simply reproductions of reality, but conveyed deep emotional turmoil and profound reflections on the world through their bold handling of light, shadow, color and line. In literature, Expressionist writers also explored the spiritual world of mankind from a unique perspective. They used allegory, symbolism and other techniques to reveal the complexity of human nature and the deep-rooted conflicts in society. This literary style not only enriches the form of literary expression, but also deepens people's understanding of themselves and society. In the field of movies, the influence of Expressionism is especially far-reaching. It not only brought new narrative techniques and visual styles to the art of film, but also greatly promoted the development of film language. Classic films such as *The Cabinet of Dr. Caligari* and *Metropolis* have become masterpieces of Expressionist cinema with their unique visual effects and profound themes. These films not only made technical innovations, such as the use of tilted backgrounds and distorted scenes to create a tense atmosphere, but also explored the themes of alienation, power and control in modern society in terms of content, demonstrating the unique charm and far-reaching significance of Expressionism in the art of cinema.

2.1.2 Core features of Expressionism

Expressionism, as a unique artistic genre, has been demonstrated to the fullest extent in the field of cinema. The core feature of this genre lies in its extreme amplification of emotions, which is not only reflected in the performances of the actors, but also in the director's skillful use of camera language and the precise coordination of sound design. Through these comprehensive means, the emotions in the movie are pushed to the extreme so that the audience can feel the complex world inside the characters more deeply. This kind of emotional exaggeration not only greatly enhances the artistic power of the movie, but also makes it easier for the audience to have emotional resonance, so that they can be more engaged in experiencing the story and emotions conveyed by the movie. In addition to emotional exaggeration, subjective point of view is also an important means of expression in expressionist movies. Many expressionist films tell the story through the subjective perspective of the characters, which not only makes the audience feel as if they were in the situation of the movie and experience what the characters see and hear, but also greatly enhances the sense of immersion in the movie. Through this unique narrative, the audience can not only understand the psychological activities and emotional changes of the characters more intuitively, but also experience the real feelings of the characters in a specific situation, thus deepening their understanding of the theme of the movie. In addition, Expressionist movies often reflect the real face of the society by distorting the reality. In this type of movie, characters, scenes and plots are often endowed with profound symbolic meanings, revealing the dark side of the society and the multi-faceted nature of human nature through exaggerations, distortions and other artistic techniques. This distorted treatment of reality not only makes the movie itself have stronger artistic expression, but also guides the audience to scrutinize the social phenomenon from different perspectives and inspires them to think deeply about the social reality. Through such artistic expression, expressionist movies not only become a visual and emotional enjoyment, but also become an important medium to inspire people to think about social issues.

2.2 Definition and evolution of the montage technique

2.2.1 Basic concepts and definitions of montage

The term montage originates from the French word “montage”. In the field of movie art, it refers to the skillful combination of different shots through editing techniques to create a specific narrative effect and emotional atmosphere. As the core technique of movie editing, montage not only plays a crucial role in the rhythm, emotional expression and story development of the movie, but also profoundly affects the artistic expression and viewing experience of the movie. Montage is not only limited to the simple splicing of shots, but also a higher level of artistic creation process. It is a higher level of artistic creation process. Through careful selection and skillful combination of shots, the elements are interrelated to each other, and together they build up the overall structure and deeper meaning of the movie. The application of this technique enables the movie to convey richer and more complex information through visual language in a limited time. In practice, the flexible use of montage technique can create a variety of narrative rhythms, which greatly enriches the expression of the movie. For example, by quickly switching between different angles and scenes, the rhythm of the movie can be effectively accelerated, creating a tense and exciting or fast-paced atmosphere, allowing the audience to feel a strong visual impact and emotional fluctuations. On the contrary, through the use of slow transitions and long shots, the pace of the movie can be slowed

down, creating a quiet and calm or thoughtful atmosphere, leading the audience into a more delicate emotional experience. Moreover, montage can also accurately convey specific emotional flows through the combination and arrangement of shots. For example, when dealing with sad or heavy scenes, by editing a series of shots with a dark tone and a slow rhythm, it can deepen the audience's understanding of the character's inner world and resonance, and make the emotional expression more sincere and touching. While in the expression of joy or relaxed moments, through the rapid editing and bright screen conversion, can effectively convey the cheerful mood, enhance the infectious force of the movie. Therefore montage is not only an important part of movie art, but its basic concept and definition cover a variety of levels such as camera combination, narrative rhythm and emotional flow. Its application in movie editing not only enhances the artistic value of the work, but also brings rich and profound audio-visual enjoyment to the audience, and becomes an important bridge connecting the creators and the audience.

2.2.2 Historical evolution and development of montage

The evolution and development of the montage technique in the history of cinema is a fascinating subject. From the simple editing of early movies to the innovative use of German Expressionism, montage has not only achieved breakthroughs in technology, but also made remarkable progress in artistic expression.

When the movie was just born, montage was mainly responsible for the basic narrative function, relying on simple camera switching to promote the development of the storyline. However, along with the gradual maturation of the art of cinema, montage began to be entrusted with more complicated missions.

In the period of German Expressionism, the technique of montage was greatly expanded and deepened. The filmmakers of this period made exquisite use of montage to create unique visual effects and express deep emotions and thoughts. Through rapid camera switches, skillful image combinations and innovative editing, they led the audience to an artistic world full of imagination and impact.

The montage in German Expressionist films not only enhanced the narrative level of the movie, but also presented an incomparable charm in emotional expression and atmosphere creation. The works of this period have provided valuable inspiration and reference for future generations of filmmakers, and promoted the continuous development and innovation of the art of cinema.

Chapter 3 Montage Techniques in Expressionist Cinema

3.1 Analysis of Classical Expressionist Films

3.1.1 Analysis of "Dr. Caligari's Cabin"

The Cabin of Dr. Caligari is undoubtedly one of the jewels of German Expressionist cinema, and its use of montage techniques is a classic among classics. The movie skillfully intertwines hallucination and reality through exquisite editing techniques, which not only vividly shows the complex psychological activities of the characters, but also profoundly reveals their deep emotional conflicts. Especially when depicting the protagonist's fear and escapism in the face of reality, the montage technique creates a visual experience that is both chaotic and haunting by rapidly

switching between different scenes and points in time. This unique editing style not only speeds up the narrative pace of the story, but also digs deeper into the inner conflicts and struggles of the characters, enabling the audience to more intuitively feel the pain and confusion of the characters. In addition, the visual language and the montage technique in Dr. Caligari's Cottage complement each other and together they build an image world full of expressionist characteristics. The twisted lines, tilted compositions, and contrasting light and shadow effects in the film not only strengthen the visual impact of the images, but also further emphasize the unique charm of the expressionist style with its exaggerated presentation and highly subjective perspective. The perfect combination of these visual elements and the montage technique not only made *The Cabin of Dr. Caligari* reach unprecedented heights in terms of technology and art, but also provided later film creators with valuable artistic inspiration and practical guidance with far-reaching impact.

3.1.2 Montage techniques in Shadow of Cabiria

In *Shadow of Cabiria*, the director skillfully blends montage and expressionism to create a unique and compelling visual narrative. Through carefully designed editing techniques, the film skillfully splices together individual shots and scenes, forming a narrative rhythm that is both fractured and coherent. This unique editing not only reveals the complex emotions of the characters' inner worlds, but also greatly enhances the dramatic tension of the entire movie. Particularly worth mentioning is that for the female protagonist Kabylia, the use of montage technique makes her joys and sorrows more vivid and distinct. Through these carefully choreographed images, the audience can deeply feel Kabylia's inner struggles and changes, and experience her journey from despair to hope. Each shot is like opening a window that allows the audience to glimpse into her deepest emotional fluctuations. In addition, *Shadow of Cabiria* explores the significance of culture and society through the use of montage. The editing in the movie is not only a tool for storytelling, but also a deep reflection of the social and cultural atmosphere of the time. Through the rapid switching of shots and the contrast between different scenes, the movie reveals the class differences in the society, the complexity of human nature and people's relentless pursuit of love and freedom. For example, some shots in the movie show the luxurious life of the upper class, which contrasts sharply with the hard environment of the slums, thus triggering the audience to think deeply about social injustice. This multi-layered social dissection makes *Shadow of Cabiria* not only a work of art, but also a movie with far-reaching social significance. It not only lets the audience enjoy the visual shock, but also inspires people to reflect deeply on the real society. Whether from an artistic or social point of view, *Shadow of Cabiria* is a classic that deserves to be savored over and over again.

3.1.3 Visual language in Metropolis

In the classic expressionist film *Metropolis*, the combination of montage techniques and visual language not only complement each other, but also work together to construct the film's profound social conflicts and futuristic themes. Through subtle editing techniques, this movie skillfully splices different scenes and shots together to create a unique visual rhythm, leading the audience to deeply explore the core ideas conveyed by the movie. Especially when depicting social conflicts, the film utilizes contrasting image splices, such as the huge contrast between the rich and the poor,

and the confrontation between man and machine, etc., which greatly enhances the impact of these visual elements through the montage technique. This treatment enables the audience to more intuitively feel the inequality and conflict in the society, thus triggering deeper thinking. In addition, the futuristic elements in *Metropolis*, such as the sky-high skyscrapers, the endless flow of vehicles and crowds, with the skillful use of montage, show a visual effect that is both breathtaking and thought-provoking.

To summarize, there is an inseparable connection between the montage technique and visual language in *Metropolis*, which together create a space full of tension and infinite imagination. In this movie world, the audience is not only attracted by its visual feast, but also unconsciously guided to reflect on the problems of the real society, experiencing a double feast of mind and vision.

3.2 Visual Language in Expressionist Cinema

3.2.1 Color and Composition

In Expressionist films, color and composition are not only visual elements, but also important means of conveying emotions and driving the narrative, which are closely intertwined with the montage technique, and together build the unique visual language and artistic style of the film. Color plays a crucial role in these films and is often imbued with deep symbolic meaning. For example, the use of cool colors can effectively convey loneliness and melancholy, while warm colors can highlight passion and tension. This color strategy not only creates a unique emotional tone for the film, but also complements the editing technique of montage, which enhances the rhythm and visual impact of the narrative through color contrasts and jumps. In terms of composition, expressionist films tend to adopt unconventional or even distorted screen layouts as a way to reinforce the psychological state of the characters or the inner tension of the story. This innovative way of composition complements the montage technique, which brings the audience into a visual world full of uneasiness and dynamism through rapid camera switches and irregular compositions. For example, in the classic expressionist film *The Cabin of Dr. Caligari*, the director skillfully uses oblique angle composition and exaggerated shadows to create a dreamy and unrealistic visual effect. This visual treatment not only increases the mystery of the movie, but also combines perfectly with the editing technique of montage to create a story world full of suspense and thriller, which makes the audience feel as if they are in a distorted dream, experiencing an unprecedented viewing experience.

3.2.2 Symbolism and Metaphor

Symbolism and metaphor are undoubtedly two crucial rhetorical techniques in the unique art form of expressionist film. These two techniques not only convey abstract thoughts and emotions through concrete visual elements, but also greatly enrich the expressive power of the movie and stimulate the audience's deep thinking and emotional resonance. These symbolic visual elements and metaphors often complement the montage technique to build up the narrative framework and emotional atmosphere of the film, making the movie not only a visual enjoyment, but also a touching experience for the mind. Symbolism occupies a central position in expressionist cinema, which is fully reflected in many classic works. For example, in the film *Dr. Caligari's Cottage*, the

director skillfully uses the twisted building lines and tilted streets to symbolize the inner chaos and imbalance of the main character. These visual symbols not only enhance the artistic effect of the movie, but also present the complex psychological state of the characters to the audience in a visual way by combining with the rapid editing of montage. While enjoying these visual wonders, the audience can deeply feel the inner struggles and pain of the characters, as if they are also in that twisted world. Metaphor, on the other hand, is the use of one thing to imply another, thus expressing a deeper meaning. In the classic sci-fi film *Metropolis*, the huge machines and busy factories are not only a direct reflection of the industrialized society, but also a metaphor for its indifference and ruthlessness. Through the contrasting editing of montage, the movie skillfully shows the great contrast between the hard life of the laborers at the bottom of the society and the luxury and pleasure of the upper class. This strong contrast is not only shocking, but also triggers the audience to reflect deeply on social injustice and human alienation. Every shot and every frame in the movie is full of deep meaning, which makes the audience think continuously during the process of watching the movie, and ultimately achieves sublimation of thoughts.

Chapter 4 The Influence of Montage Techniques on Modern Cinema

4.1 Expressionism's Implications for Contemporary Cinema

4.1.1 Inheritance of contemporary montage techniques

Modern films have shown colorful practical exploration in inheriting and developing expressionist montage techniques. Many contemporary films not only continue the emotional impact of expressionism through skillful editing techniques, but also give the story a whole new narrative dimension. For example, in *Mad Max: Fury Road*, director George Miller utilized fast-switching images and jumping narrative rhythms, a technique clearly influenced by expressionist montage, which pushed the film's tense atmosphere and intense action to a climax, bringing the audience a double feast of vision and emotion. In the animated movie *Wreck-It Ralph*, through the precise coordination of visual effects and sound effects, the movie successfully creates a vivid and realistic virtual game world. This treatment is also an innovative interpretation of the modern montage technique, which not only enhances the immersion of the movie, but also allows the audience to more deeply appreciate the emotional changes of the characters and the development of the storyline. These specific application cases not only prove the strong vitality of the montage technique in contemporary films, but also demonstrate its diversity and innovation in different types of films. Through in-depth analysis of these films, we can understand more clearly how the expressionist montage technique has been inherited by modern cinema and further developed and reshaped in new creative contexts. Whether through visual impact or emotional resonance, the montage technique provides infinite possibilities for the expression of contemporary film art, making the medium of film more colorful in storytelling and emotion transmission.

4.1.2 Evolution of the visual language

The visual language of modern movies is deeply influenced by Expressionism, especially in terms of narrative techniques and emotional expression showing remarkable innovation. With its unique and creative visual style, Expressionism breaks the boundaries of traditional narrative and

injects new vitality into the art of cinema. By browsing the Internet Movie Database, we can find that many contemporary movies clearly embody the characteristics of Expressionism in terms of lens use, scene design, and light and shadow effects. Through the use of sharp color contrasts, non-traditional compositional methods and exaggerated visual elements, these works bring the audience into a wonderful world full of infinite imagination. Particularly in terms of emotional expression, modern movies have borrowed extensively from Expressionism, making the conveyance of emotions more profound and delicate through elaborate visual language. For example, in some psychological suspense films, directors often use distorted visual effects and rapid editing rhythms to depict the inner confusion and uneasiness of the protagonist. This expression not only enhances the tension of the movie, but also enables the audience to feel the psychological state of the characters more intuitively. This method of expression is precisely derived from the artistic concept of Expressionism, which emphasizes the expression of inner emotions and mental states through exaggeration and distortion. Therefore, it can be said that Expressionism has had a profound influence on the development of visual language in modern movies. It not only pushed forward the innovation of film art form, but also promoted the diversity and depth of film content expression. This influence is not only limited to specific types of films, but has widely penetrated into the creation of all kinds of films, becoming an indispensable part of modern cinema. Whether it is a commercial blockbuster or an independent production, a sci-fi masterpiece or a literary fiction, the influence of Expressionism can be clearly seen. It has not only enriched the expression of movies, but also provided movie creators with more creative inspirations and possibilities, making modern movies reach unprecedented heights both visually and emotionally.

4.2 Cross-cultural influences

4.2.1 Expressionist elements in international cinema

Expressionism, as a unique artistic style, has not only left a deep imprint on German cinema, but its influence has also crossed national boundaries and widely penetrated into the field of international cinema. From Europe to America, filmmakers from many countries have absorbed and borrowed the montage techniques and visual language of Expressionism to varying degrees during the creative process, thus enriching their artistic expressions. Taking French movies as an example, many suspense films were obviously deeply influenced by German Expressionism when creating a tense atmosphere. French directors skillfully use dark tones, tilted compositions and irregular editing techniques to successfully construct a disturbing psychological space. This unique visual style not only enhances the tension of the movie, but also makes the audience feel as if they are in a twisted world full of unknown dangers, which greatly enhances the movie-going experience. Similarly, American cinema has also made remarkable achievements under the influence of Expressionism. Especially in Film Noir and thrillers, American directors created a series of unforgettable classics through strong contrasts of light and shadow, exaggerated performances, and non-linear narrative structures. Not only are these films unique in their visual style, their narrative techniques are also full of innovation, making the stories even more compelling. For example, the high-contrast lighting effects in film noir not only create a mysterious and depressing atmosphere, but also provide a rich visual metaphor for the inner world of the characters. It can be said that Expressionism is no longer just a country-specific art style, but has developed into an international

movie language. It has constantly renewed its vitality by integrating cultural elements and aesthetic concepts from different countries. In the context of globalization, expressionism has not only helped film creators break through the traditional narrative framework, but also brought audiences more diversified visual enjoyment. Whether it is European literary films or American commercial blockbusters, the shadow of expressionism is everywhere, and it has become an indispensable part of modern movies.

Against the backdrop of globalization, the exchange and fusion of expressionism with other film styles has become a key trend in the development of contemporary cinema. This fusion not only enriches the forms of cinematic expression, but also brings audiences a deeper and more unique artistic experience.

Expressionism, which originated in Munich around 1910, has exerted a profound influence on the art of cinema by virtue of its individualistic, subjective and socially critical nature. The technique of montage, as a theory of shot combination, was advanced by the Soviet School of Cinematography, which gave more possibilities to cinematic narratives. When these two powerful cinematic forces encountered each other, they gave rise to numerous amazing works of cinema.

Schindler's List, for example, is a masterful blend of expressionism and montage techniques, using unique visual effects and narrative styles to expose the brutal realities of World War II. The use of expressionist elements, such as distorted scenes and exaggerated characters, and the subtle editing of the montage technique, together construct an artistic world full of tension and impact.

In contemporary horror and crime films, expressionist elements are also often seen, creating a tense and suspenseful atmosphere together with montage techniques. This cross-genre fusion not only demonstrates the infinite possibilities of film art, but also brings audiences a richer and more diverse visual feast.

Chapter 5 Conclusion

5.1 Summary of the study

5.1.1 Main findings

With its unique montage technique and visual language, German Expressionist film has brought a profound impact on film art. This study shows that Expressionist films show remarkable characteristics in the use of montage, such as rapid switching and jumping editing to enhance the expression of emotions and the rhythm of the narrative. This technique not only enhances the audience's understanding of the characters' inner world, but also gives the movie more tension and depth in terms of narrative.

In terms of visual language, expressionist films are good at using distorted lines, exaggerated colors and irregular compositions to create a fantastic atmosphere [21]. This visual style and the montage technique combine with each other to construct a form of imaginative and creative movie expression. This kind of expression has had a significant impact on the subsequent film production, and has injected new vitality into the development of film art.

The montage technique and visual language in German Expressionist films not only enriched the form of film expression, but also improved the artistic value and viewing experience of films. These findings are of great significance to the understanding of the evolution and development of film art.

5.1.2 Research innovations

Through an in-depth analysis of montage techniques and visual language in German Expressionist cinema, this study presents a number of innovative ideas and research results. Specifically, the study not only systematically comprehends the historical background and core features of Expressionism, but also explores in detail the unique application of montage technique in this artistic genre, revealing how it enhances the emotional expression and narrative rhythm of the film through editing techniques. The study also creatively incorporates visual language into the analytical framework, and deeply analyzes the important roles of color, composition, symbolism and metaphor in Expressionist films.

With the support of data and examples, this study further demonstrates the profound influence of German Expressionism on modern film art, especially the inheritance and development of montage techniques and visual language in contemporary film creation. These findings not only enrich the theoretical study of film art, but also provide valuable insights for future film creation.

Looking ahead, this study hopes to inspire more scholars to pay attention to German Expressionism and its film art, and to promote the deepening and expansion of related research. It is also expected that movie creators will gain inspiration from this study and push the application of montage techniques and visual language to new heights.

5.2 Limitations and shortcomings

5.2.1 Shortcomings and problems

Even though the montage techniques and visual language of German Expressionism have been thoroughly explored in current research, there are still some shortcomings [22]. In analyzing and interpreting the influence of Expressionism, this paper encounters a number of challenges and dilemmas [23].

For one thing, given the complexity of the historical background and cultural environment of Expressionist cinema, there may be some limitations in understanding the deeper meaning of Expressionism in this paper. Moreover, the use of visual language and montage techniques in Expressionist films is often highly individualized, which makes it difficult to make generalizations.

Secondly, in the process of research, we have limited access to primary sources and literature, and there is a relative lack of detailed analysis of some films, which, to a certain extent, limits the depth and breadth of our research. In terms of how Expressionism influences the subsequent development of cinema and its specific presentation in contemporary cinema, the analysis in this paper needs to be further strengthened.

In the future, we will try our best to overcome these shortcomings, and with a wider collection of data and more in-depth analysis, we hope to build a more comprehensive and precise understanding of German Expressionism and its influence.

5.2.2 Research constraints

Although this study has achieved some results in exploring the montage techniques and visual language of German Expressionism, it still has limitations. For one thing, given that the scope of the

study focuses on the presentation of art in a specific period and region, it does not go far enough in exploring the influence of other film styles and expressionism in a global context. Future research can further extend the cross-cultural perspective and analyze the variation and inheritance of Expressionism elements in the films of different countries.

Secondly, this study mainly relies on theoretical analysis, and the support of empirical data is relatively weak. Subsequent studies can quantitatively assess the effectiveness of montage techniques and visual language in audience perception through empirical means such as audience research and movie acceptance analysis.

Along with the advancement of digital technology, film art continues to innovate in editing techniques and visual presentation. Future research can focus on how digital technology has reshaped traditional techniques such as montage, and how these changes have affected the narrative and aesthetic of contemporary cinema. This will contribute to a more comprehensive understanding of the evolution and transformation of cinematic art.

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The Duke of Zhou from the perspective of psychological dynamics: the symbolic significance of the snake and the interweaving of Chinese culture

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Abstract

The paper investigates that potential dimension of it in the realm of psychology and the value of it in ancient Chinese culture. Important factor of the cultural heritage of ancient China, it shows systematic interpretation of dreams and reflects the old understanding of destiny, cosmic order. Thus, this work has profoundly affected feelings in the folk culture and has become a reference for decision making decisions in daily life. On the other hand, in contrast to the dreams study in western psychology, the analysis of it shows universality in human exploration of the meaning of dreams and suggests its potential value in the area of psychology. A very broad cross-cultural psychological perspective gives a finer point of understanding to this book while also adding an insight into the common human psychological characteristics and subconscious patterns. The whole paper essentially draws the attention of a Viewer towards how valuable the Zhou Gong Jie Meng has been as a psychological contribution and how deeply it is interlinked in ancient Chinese culture.



Full Text Article



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Keywords : Snake; dream; subconscious; psychology

Foreword

Psychological dynamics, or Psychodynamics¹, is a psychological method of exploring human behavior in terms of psychological influences. This method allows for the examination not just of the behaviors, feelings, and emotions, but their interrelationships and with early experiences. With

¹ Psychodynamics: It is a psychological faction founded by Freud, which emphasizes the influence of subconscious power on individual behavior and psychological processes, as well as the exploration and understanding of the deep structure of human psychology.

regard to consciousness, motivation, and subconscious mind, psychological dynamics is mainly concerned with the process. Psychodynamics theory forms an important ideological basis in social work, emphasizing that emotionality and internal conflict were crucial in the course of generating and solving problems. It provided resourceful ideological materials for valuable theoretical support to practice work. Psychodynamics represents the aspect of social work which is social cohesion, where people are encouraged to adapt and integrate into orderly, surrounding societies. Psychodynamics is a psychological faction, which was founded by Freud, emphasizing the power of subconscious activity on individual behavior and psychological processes, as well as examining and understanding the deep structure of human psychology.

When you contrast old knowledge and the modern science of psychology, you get the Duke of Zhou² on Dreams, which is something more than just an antique piece of writing. This ancient literature is a treasure-trove of Chinese culture and is also one of the earliest documents of dream interpretation. Through psychological dynamics, Dream of Zhou's symbols could then be used to understand deeply the dreams that form part of the ancient man's psychological life, apart from reflecting their inner world and subconscious mind. It's more on the psychological dynamics-particularly that of Freud and Jung- which interprets dreams as an avenue of subconscious communication in symbols that relates to deep human desires, fears, and conflict. It's found that, while the symbols of The Dream of Zhou are distinctly drawn from the ancient background of culture in China, their psychological values agree with the modern psychodynamic theory so as to teach us a new angle of time- and space-based dream interpretations. Through this analytic method, both with reference to cultures and time periods, we would be able to not only understand Zhou Gong more deeply but also get a glimpse into common human psychologies and subconscious patterns. The Duke of Zhou: One is that of the ancient Chinese classics, one is the literature on dream interpretation and psychological thought, and in fact what is viewed as an important work in ancient studies of Chinese dreams, one is the fragment from the Chinese classical literature.

The deep connection between the Zhou gongs dream and Chinese culture

The most important ancient cultural legacy of China is the Duke of Zhou. It's because it defines systematic interpretations of dreaming by all groups of people from China. It reflects also the fate ancient beings saw and cosmic order to which he belonged. This work penetrates folk culture and even becomes reference in making choices in life. In some sense, dream analyses resemble the works on dreams in the western psyche, especially with regard to the discussions on the relationship between the dream and subconscious mind, which could be regarded as early embodiments of the psychology concept of eastern culture even though this was developed earlier than modern psychology's systematic pattern. Such an approach can show, from a cross-cultural psychological point of view, the universal element in the quest of mankind for purpose in dream realization, and perhaps even in its value for psychology of a general nature.

² The Duke of Zhou: is one of the ancient Chinese classics, is a literature on dream interpretation and psychological thought, is regarded as an important work in the study of ancient Chinese dreams.

According to traditional Chinese culture, dreams are considered a deep symbol related to philosophy, religion, and folk customs. Dreams are a bridge between humans and the universe, whether reflecting the harmony or disharmony between them. Following the Yin-Yang theory and the five elements, dream phenomena are the result of interaction between the individual's internal system with outside environments. Psychologically, dreams are viewed as manifestations of an individual's subconscious desires and fears. Works like *The Duke of Zhou* would provide rich symbolic meanings that reflect ancient observations of daily life and social structure. In Taoism and Buddhism, dreams are often treated as the vague expressions by which the reality was shown as a line into illusion. From literature to art, dreams bring ideals and emotions towards exploring the mysteries of human beings and the universe. Overall, the view of dreams is from a cultural perspective like dreams are neither mere direct interpretation of dreams nor do they merely serve as an outcome but express an entire understanding of life, universe, and the soul also an expression of the deep understanding of life, the universe and the soul.

The basic principles of psychodynamic dream interpretation and the interpretation of symbolism

The so-called study of dreams in psychology commences with the much pioneering work made by Sigmund Freud. In his book published in 1900, "The interpretation of Dreams,"³ he sees dreams as the way of fulfilling deep human desires. The focus is mainly on sexual hunger. This theory of dreams was used in therapy for neurosis. Understanding Freud's psychopathological concepts on neurosis is more than understanding this theory. He explained how a number of psychological symptoms were the effects of suppressing sexual desires. Some people will act like children and exhibit behaviors resembling children when they are not more comfortable letting off such sexual impulses. Examples of sexual abnormalities that develop in adults and look like child behavior are voyeurism and exhibitionism. For example, sometimes children look at the private parts of other people or exhibit their private parts when other people are around, which is for enjoyment. Freud believed that much of abnormal sexual behavior is actually the external expression of a sexual maturation process that had originally begun in early childhood.

Carl Jung was the most important disciple of Sigmund Freud and started to dispute the principles of developmental psychology. Unlike Freud, who believed that dreams manifest a suppressed sexual desire, Jung offered another interpretation: he thought of dreams as manifestations of one's unconscious wisdom. Whereas Freud saw the unconscious as a storehouse of wants, he saw it as an insight resource. Indeed, wisdom in the unconscious surpasses even that of the conscious. He further argued that in sleep, the repression that takes place during daily life is temporarily withdrawn during which these hidden treasures in the heart can emerge.

Erich Fromm examined the works of Freud and Jung regarding dream theory, independently formulating his departure. He suggested that dreams are nothing but ways of revealing human nature, very meaningful and critical expressions of our mental activities during sleep. In this theoretical system, dreams have the capacity to reveal desires once considered "reasonable" or

³ The Analysis of Dreams: It is a work of Freud, which proposes that dreams are the expression of subconscious desire, and reveals the deep meaning of individual psychology by analyzing the symbols in dreams.

"unreasonable", and at the same time indicate an integration of reason and wisdom. Fromm's principle system strongly analyses the interweaving of love with reason, desire with morality, evil, and good in a dream. The theory builds itself upon the social subconscious mind, adopting Freud's understanding of the theory of the subconscious mind and extending and deepening it. In this connection, he opposes the interpretation of the subconscious content as sex and the idea that repression is only that of sex. Man thus declares that dreams are not only manifestations of sexual satisfaction. At the same time, Fromm agrees with the wide understanding of the subconscious as that of Jung. The subconscious intelligence may transcend the human level of consciousness; however, Fromm does not accept the opinion of Jung on dream interpretation which is generally considered as an expression of the collective subconscious, either a reflection of ancestral wisdom, or a genetic consequence of ethnic experience. He also thinks that our subconscious wisdom is in truth, derived from our very reality-Living Environment along with a social and cultural environment. Hence, our dreams may reflect a deep comprehension of the personal reality containing a true understanding of the social culture. In waking states, these insights are often masked by hallucinations and lies.

The symbolism of the snake

1. Symbolism of snakes in different cultures and psychodynamics

The symbolism of snakes is rich and complex. The ranges of interpretations are immensely varied in cultures and psychodynamics. For example, in the Egyptian culture, snakes were symbols of life and health. This meaning went deep into the essences of life and revivification. Snakes occur in most of the arts and hieroglyphs as coiling around a staff-like symbol of the god Asclepius, that personifies healing and medicine. However, in the Chinese cultural fabric, the snake has something to do with wisdom and spirituality as it intimates the very deep connection between the earthly and the heavenly domains. The snake is an animal in the Chinese calendar, believed to endow its signs with intelligence and insight. In Christian culture, on the contrary, snakes are sometimes regarded as conditions of temptation or evil. Accordingly, this representation has very strong roots in the biblical stories like Adam and Eve, where the serpent is known as a deceiver and, perhaps metaphysically, the downfall of humanity.

From a psychological viewpoint, the meanings that hold for this serpentine symbolism emerge as equally striking and varied. According to Sigmund Freud, the founding father of psychoanalytics, the snake represents sexual conflict and anxiety rather than human sexuality itself, which is complex and sometimes tumultuous in nature. He believed the snake's phallic shape and the fear of it acts as repression of sexual desires and subconscious conflicts. Whereas, the snake for Carl Jung's analytical school was a sign of the self's potency, wisdom, transformation, and regeneration. This suggested that it had, by and large, that power inherent in individuals to renew themselves: a wisdom from internal experience. The snake's shedding, and coming out again, were meant to symbolize the potential for human growth and development. Such meanings, and even more, have a number of signs and interpretations that reflect the stark actuality of snakes in human psychology and culture. They make salient how a single creature can be viewed in substantially different terms, being signified in both positive and negative aspects of human experiences. For that matter, the snake becomes a powerful symbol of the intricacies of life, the dual nature of human beings, and the

unending dance of good and evil. It can mean the life force and potential destruction, and also be a custodian of hidden knowledge as well as a harbinger of danger. Hence, the snake keeps enticing and teasing, challenging us to face the darker part of our psyches while offering hope for purity and enlightenment.

2. Snake similarities and differences in Chinese culture and psychodynamics

The subject of snakes brings about fascinations and interpretations that have proved unique among Chinese culture and psychodynamic perspectives. In many perspectives, snakes are seen broadmindedly as being very similar to their psychological constructs in aspects like wisdom and spirituality. They closely relate to ideas about metamorphosis and rebirth, which express ingrained faith in the ability of snakes to shed off old skins and become fresh and shiny creatures.

However, to deviate from cultural context, one will touch on what people near the pain and loss tend to say about snakes: in Chinese culture, snakes progenitive-ally interlace themselves into given legends and mythologies. They can be taken as meanings of loyalty and love. The White Snake is a legend that takes on a snake spirit uniquely falling in love with a human: which shows the capacity of a snake to much love and loyalty with depth of emotion.

It is believed by those involved in psychodynamics and bearing qualities of snake in the light of Carl Jung's ideas, snake acquires a significant connotation regarding being an archetypal symbol of collective unconscious. Jung's collective unconscious theory indicates that some forms and motifs are instilled and shared worldwide in human cultures. Thus, the snake stands as one of those archetypes strongly representing instinctual, sometimes shadowy, parts of the human psyche.

Yet another point of insight is that serpents in Chinese culture are usually devoid of their many connotations in the West as negative creatures through which the mind relates to the reality of things. Many narratives in Western discourse depict snakes as harbingers of fear, evil, temptation, and sin; for example, in the biblical story of Adam and Eve, the snake served to tempt Eve into eating the forbidden fruit. This contrast illuminates the extreme differences through which a common symbol can be completely understood under many cultural and psychological spectacles.

Similarities and differences of cultural and psychological interpretations of the snake include much more reality in the multi-dimensional, cross-cultural nature of the snake as a symbol. The snake represents a kind of creature replete with complex meanings, mirroring this plural pane through which humanity interprets and relates to the naturalistic aspects of the outside world with deeper insights into their psyches.

Image analysis of the snake in his dream

1. Zhou Gong explained the case of snake dream in his dream

In the ancient book "The Duke of Zhou", the interpretation of dreams is quite profound and symbolic. For example, " the dream of a dragon or snake entering the house is often seen as an auspicious sign of impending wealth; while the dragon and snake joining the stove is a sign of prosperity and promotion. The scene of the snake changing into a dragon implies that there will be noble people and the support of important people. For women, dreaming of the dragon symbolizes the birth of a prominent or accomplished child. Conversely, the presence of a dragon or snake in a

killing scene is often ominous, indicating the potential for a major disaster or misfortune. And the dream of the snake bite himself, an unexpected symbol of the imminent great wealth. If the snake enters the embrace in the dream, it indicates the birth of a noble or accomplished offspring. The sight of snakes swimming in the water usually symbolizes an imminent job promotion or an increased reputation. The dream that a snake follows someone away may indicate infidelity in a marriage. The dream of a snake entering the valley may signal the prospect of gossip or arguments. The dream of a snake wrapped around its body also indicates the birth of a noble or distinguished offspring. Large numbers of snakes appear in dreams and may be associated with underworld or supernatural events. While dreaming of red and black snakes, usually an auspicious omen of rhetoric controversy; yellow and white snakes may mean willA legal or legal issues.

2. Psychological dynamic interpretation

In the field of psychodynamics, especially under the theoretical framework of Freud and Jung, the symbols in dreams often reflect the deep thinking, desires and conflicts of the subconscious mind. As a symbol of power, the snake is often interpreted in psychoanalysis as representatives of sexual desire, creativity, or the fundamental power of life. For example, Freud may associate the dream snake to sexual desire or potential instinctive repression, while Jung may look at the snake as the symbolism of wisdom, healing, and change. Psychological dynamics holds that dreams are a form of expression of the subconscious content. Under this understanding, the appearance of snakes in dreams may symbolize an unresolved conflict within the dreamer or an underlying capacity not yet fully realized. For example, the image of snakes in dreams may reveal dreamers fear of certain problems in life, or a sense of confusion about gender roles. In interpreting a dream, the dreamers emotional response to the dream event is also critical. If a dreamer feels fear of a snake in his dream, it may reflect fear or rejection of certain aspects of the subconscious mind; if attracted or comfortable, it may mean acceptance of internal conflict or desire. Psychological dynamics also emphasizes that the cultural background of the individual should not be ignored when interpreting dreams. The symbolic meaning of snakes may be quite different in different cultures. In some culturesInside, snakes may symbolize evil and temptation, while in other cultures, they may represent wisdom and healing. In conclusion, from a psychodynamic perspective, the dream of snakes may reveal deep psychological conflict, underlying desires, fear, or processes of personal spiritual growth. This interpretation depends not only on the content of the dream itself, but also on the shadow of the dreamers personal experience, emotional state and cultural background.

Conclusion

In general, one can both summarize and elaborate on dream interpretation from the psychodynamic view set forth by Zhou Gong, as being able to ponder the meaning of dreams given this psychological existence attributed in the ancient times makes it all the more interesting because the significance underscores how dreams bring reflective moments of our innermost psyche and subconscious. In Chinese culture, dreams are rich and diverse symbols embodying philosophy, religion, and folk. Dream symbolism is central to psychodynamic theory because dreams would reveal deep-seated human desires, fears, and internal conflicts. Importantly, The Duke of Zhou's

teachings are an ancient Chinese cultural heritage that demonstrates the systematic Chinese technique of interpreting dreams: they represent, as well, the understanding of the ancient people about destiny and the cosmic order. From a cross-cultural psychological perspective, the dream interpretation idea would emphasize the similarity within humanity's struggle to make sense of dreams. It, therefore, pinpoints the probable significance and worth dream analysis would carry in psychology. This psychodynamic interpretation of dreams, as Zhu or Duke Zhou would teach, serves as a lot more than just a cut of the ancient Chinese psyche. This also brings out a vital truth in a universal human perspective—it emphasizes such an important function of dreams as a medium for understanding the subconscious mind and the inner workings of conflict within individuals. It no longer remains a mere artifact of history, but an enduring testament to the relevance of inquiry in psychology both in cultures and ages. Hence, through the interpretation of symbolism and the psychological dynamics embedded in dreams, we begin to know more about the human condition and the quest for self. This pursuit of dreams as a portrayal of our inner world still provides a wealth of knowledge on the human mind and remains one of the active research fronts in psychology itself. In the future, we must keep embracing and further developing these ancient wisdoms by integrating contemporary theory into its folds to enrich our understanding of the human mind and spirit.

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Innovative Marketing Approaches in Management for Business Success

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Abstract

To explore the importance of innovative marketing methods in management in achieving business success, specific methods, business cases and implementation suggestions, so as to help enterprises enhance market competitiveness and achieve sustainable development. This paper comprehensively expounds the theoretical basis of innovative marketing methods, analyzes their importance, introduces in detail common innovative marketing methods such as social media marketing, content marketing, experiential marketing and word-of-mouth marketing, and demonstrates them by analyzing the cases of outstanding foreign enterprises such as Coca-Cola. It also puts forward some implementation suggestions, such as paying attention to consumer demand, cultivating innovative thinking, strengthening team cooperation and continuous learning. To provide enterprises, governments, academia and other relevant parties with a comprehensive understanding of innovative marketing, help them make more informed decisions in business practice, and promote the healthy development of the business environment. A comprehensive and systematic study of the application of innovative marketing methods in management, combined with in-depth analysis of actual cases, provides theoretical support and practical guidance for enterprises to formulate innovative marketing strategies, and fills some gaps in relevant research in this field.



Full Text Article



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Keywords: Innovative marketing; Commercial success; Social media marketing; Content marketing; Experience marketing; Word-of-mouth marketing

Introduction

As the global economy continues to evolve and market competition becomes more intense, the challenges facing enterprises have reached an unprecedented level. In this environment, finding out how to achieve business success through innovative marketing methods has become a core focus of enterprises (Katarzyna Bachnik, 2024).

Innovative marketing methods mean that companies, on the basis of traditional marketing paths, closely adapt to the dynamics of market evolution and the subtle changes of consumer demand, boldly adopt new marketing concepts, means and cutting-edge technologies to significantly improve marketing effectiveness and enhance the core competitiveness of the company.

In today's era, the digital wave is raging, and the value of data is more and more prominent. According to a report by well-known market research firm Statista, the global big data market has broken the \$200 billion mark by 2023 and is continuing to expand at an alarming rate of about 20% annually. Take Walmart as an example (Neha Rishi, 2024). Through in-depth mining and analysis of vast amounts of consumer shopping data, including purchase frequency, product preferences, consumption time and other multi-dimensional information, it accurately targeted the target customer group. Based on these insights, Walmart was able to tailor and personalize its marketing plan, achieving a 30% increase in advertising accuracy, which in turn significantly improved marketing effectiveness and sales conversion.

The influence of social media is even greater, and it has become an indispensable part of people's daily lives. According to Hootsuite, a global social media management platform, the number of social media users worldwide has surpassed 4 billion, with users spending an average of more than 2 hours a day on social media. For example, Coca-Cola Company takes full advantage of the communication power of social media platform to launch global brand marketing campaign. Through the publication of creative and infectious brand stories, interactive topics, and user-participatory marketing campaigns on major social media platforms such as Facebook, Twitter, and Instagram, we have successfully attracted the active participation and interaction of hundreds of millions of users (Lanxiang Yang, 2024). This not only greatly enhanced the close connection between the brand and the consumer, but also significantly increased the brand's visibility and reputation globally, further driving the sales growth of the product.

Experiential marketing is also emerging as an important tool to attract consumers. Apple is an example of experiential marketing, with its worldwide retail stores not just as a place to sell, but as carefully designed temples of technology and art. A variety of experience areas have been set up in the store, allowing consumers to freely try Apple's various products and deeply experience the outstanding quality, innovative design and unique charm of their products. This immersive experiential marketing model has enabled Apple to establish a loyal fan base worldwide, laying a solid foundation for its continued commercial success.

Cross-border cooperation marketing also opens up new horizons for enterprises and brings new development opportunities. For example, Louis Vuitton's cross-border collaboration with street fashion brand Supreme is a classic example. Once the two joint collections were launched, they caused a sensation in the global fashion world, instantly becoming a popular product that consumers were racing to chase (Vu Pham Minh, 2023). According to the fashion industry media coverage, the sales of the joint series broke hundreds of millions of dollars in a short period of time, not only for

both brands to attract a large number of new customer base, but also further expand the market boundary and commercial value of the brand.

Green marketing has also received much attention with the rise of environmental awareness. Tesla's outstanding performance in the field of electric vehicles is a successful example of green marketing. By promoting electric vehicles, Tesla not only meets the urgent needs of consumers for environmentally friendly travel, but also actively establishes a good social image of the company in terms of sustainable development. Relevant data show that Tesla's share of the global electric vehicle market has steadily increased year by year, as of 2023, its market share in some areas has exceeded 30%. This achievement cannot be achieved without its continuous efforts and innovative practices in green marketing.

As an emerging marketing method, live streaming is also rising rapidly around the world. Take Amazon.com as an example, it is actively expanding its live streaming e-commerce business to show global consumers the characteristics and advantages of various products through the live streaming platform. The anchors interact with consumers in real time during the live broadcast, promptly answering consumers' questions, and effectively promoting the sales of products. According to market research firm eMarketer, the global live e-commerce market reached hundreds of billions of dollars in 2023, and is expected to maintain rapid growth in the next few years (Hitmi Khalifa Alhitmi, 2023).

In conclusion, in the context of the changing global economic landscape and the extremely fierce market competition, Enterprises must continuously innovate marketing methods, sharply discern the changing trends in the market, accurately grasp the pulse of consumer demand, and actively adopt new marketing concepts, means and technologies, in order to be unbeaten in the fierce market competition and achieve long-term commercial success.

Importance of innovative marketing methods

2.1 Improving the competitiveness of enterprises

In today's highly competitive market environment, competition among enterprises has intensified. Consumers face a multitude of choices, and attention becomes a scarce resource. Traditional marketing models are becoming homogeneous, making it difficult to attract consumers' attention effectively. For example, in the smartphone market, many brands are fiercely competitive, and it is difficult for companies to shine a light if they rely solely on traditional advertising and price competition. And innovative marketing methods provide enterprises with the opportunity to break through the constraints. Apple, for example, uses innovative marketing methods to focus not only on the promotion of product features, but also on the lifestyle and cultural values that the product represents. Each year's launch event becomes the focus of global attention, creating a strong sense of expectation and topicality through carefully planned displays, unique product demonstrations, and interactions with the media and consumers. This innovative marketing has made Apple products extremely recognizable and attractive around the world, and the market share has long maintained a leading position. According to market research firm Counterpoint Research, Apple's share of the global high-end smartphone market reached 35% in 2023, far exceeding other competitors. Innovative marketing methods help enterprises create unique marketing value, such as

brand story, personalized service experience, etc., so that enterprises stand out from many competitors and win the favor and choice of consumers.

2.2 Satisfying consumer demand

With the development of the social economy, the living standards of consumers have improved significantly, and the consumption concept has also undergone a profound transformation. Consumers are no longer satisfied with basic product functions, but put higher demands on the quality, personalization, and experience of products or services. They are eager for products and services that meet their unique needs and values. Innovative marketing methods provide a powerful tool for companies to gain insights into consumer needs. Through big data analysis, social media interaction, and market research, enterprises can accurately capture consumer interests, purchasing behavior patterns, and potential demand. For example, Amazon.com uses its huge user data and advanced data analysis technology to provide consumers with personalized product recommendations, greatly improving the convenience and satisfaction of consumer shopping. Based on these precise needs insights, companies can develop more targeted products and services. For example, automakers have launched new energy resources smart cars based on consumer demand for environmental protection and intelligence, and demonstrated their advantages to consumers through innovative marketing tools, such as online virtual test drive and intelligent driving experience activities. This not only meets the increasingly diverse and personalized needs of consumers, but also improves consumer satisfaction and loyalty to the enterprise, earning the enterprise a long-term stable customer base.

2.3 Promoting enterprise development

Innovative marketing methods have a positive impact on the development of enterprises in many ways. First, it helps companies to explore new market areas. With the market becoming saturated, companies need to find new sources of growth. Through innovative marketing, businesses can identify unmet market needs or potential consumer groups, thereby opening up new directions for their business. For example, with the increase of health awareness, the demand for fitness equipment is growing. Some enterprises have combined fitness equipment with smart technology through innovative marketing methods, launching smart fitness equipment with online courses, sports data analysis and other functions, and targeting the home fitness market with precision marketing, successfully opening up new market shares. Second, innovative marketing can expand the business scope of the enterprise. Enterprises can expand the boundaries of their business and achieve diversified development through cooperation with other industries and cross-border marketing. For example, cosmetics brands have collaborated with fashion brands to launch joint products, attracting the fan base of both brands through innovative marketing campaigns, not only increasing product sales, but also expanding the brand's influence and business scope. In addition, innovative marketing can increase a company's revenue streams. Through innovative pricing strategies, sales channel expansion, and value-added service provision, enterprises can increase the added value of products or services, thereby achieving revenue growth. At the same time, innovative marketing also helps to improve the brand awareness and reputation of the company.

Through unique brand communication and socially responsible marketing, enterprises can establish a good corporate image and win the trust of consumers and social recognition. For example, Coca-cola, by actively participating in public welfare activities and combining it with brand marketing, promotes the brand's social image and further consolidates consumers' love and loyalty to the brand. This has laid a solid foundation for the long-term development of the enterprise, making the enterprise more advantageous and sustainable in market competition.

2.4 From the 4Ps to the 4Cs: A Core Shift in Marketing Theory

The traditional 4P marketing theory emphasizes Product, Price, Place, and Promotion, and enterprises build marketing strategies around their own products and resources. But in the era of innovative marketing, the consumer-centric 4Cs theory has emerged. The 4C theory covers Consumer, Cost, Convenience, and Communication. For example, in the smartphone market, Apple is no longer solely focusing on product performance improvement (the traditional 4P product element), but starting from consumer needs, understanding their desire for convenient operation, personalized features, and brand emotional connection (the consumer element in the 4Cs). Pricing considers the cost of consumer purchase, including the cost of money, time and energy, rather than pricing based solely on the cost of production (cost factor); Through the direct sales model of online and offline integration, consumers can conveniently purchase products (convenience elements); And use social media, offline experience stores and other multiple channels to communicate with consumers in depth, timely feedback and interaction (communication elements), to achieve a precise transformation from 4P to 4C, so as to better drive innovative marketing practices.

The diffusion model of innovation theory is essential to understand the penetration trajectory of a new technology or new product in the market. Taking electric vehicles as an example, when brands such as Tesla entered the market in the early days, they faced consumer concerns about range and convenience of charging facilities, which is a typical obstacle for innovative products in the early stage of market diffusion. According to Rogers' innovation diffusion theory, consumers can be divided into five categories: innovators, early adopters, early adopters, late adopters, late adopters, and laggards. Tesla first attracted innovators who pursued cutting-edge technology and environmental protection concepts, and as product technology improved and charging networks gradually improved, early adopters began to follow. By accurately positioning consumer needs at different stages, enterprises formulate targeted marketing strategies, such as launching more cost-effective models for early Volkswagen, expanding the supercharging network, accelerating the acceptance of products in the market, and providing strong guidance for innovative marketing in the promotion of new technology products.

Common innovative marketing methods

3.1 Social Media Marketing

Social media marketing has become an indispensable innovative marketing tool for businesses today. The social media platforms represented by Facebook, Twitter, Instagram and so on have brought together a large number of users, providing a broad marketing space for enterprises. Companies can attract user attention by publishing valuable content. For example, a fashion brand

regularly posts shows of new clothing, fashion trend analysis and other content on Instagram, attracting the attention of a large number of fashion enthusiasts and rapidly growing the number of fans. Enhance the interaction with users by conducting interactive activities such as online quizzes, sweepstakes, topic discussions, etc. An electronic product brand launched a Q & A activity on Twitter about new product features, and users actively participated in it, which not only improved the brand's reputation, but also collected users' expectations and suggestions on the product. In addition, accurate advertising is also an important way of social media marketing. Companies use user data from social media to target their ads and improve the effectiveness of their ads. According to statistics, the click rate and conversion rate of social media ads are significantly higher than traditional ads, and the conversion rate of social media ads in some industries can reach 5% -10%. Social media marketing also has the characteristics of fast communication, a popular piece of content can spread quickly in a short time to form a widespread influence. For example, after a brand's creative advertisement is posted on social media, due to user sharing and dissemination, it gains millions of exposure within a few days, greatly improving the brand's popularity and reputation.

3.2 Content Marketing

The core of content marketing is the creation and dissemination of valuable content to meet the needs and interests of consumers. Companies can create content in many forms. Blogging is one of the most common forms used by businesses to attract users and build trust by writing professional industry articles, product use tutorials, corporate stories, etc. For example, a beauty brand's blog published various makeup tips and product reviews, attracting the attention of a large number of beauty enthusiasts and becoming an important channel for them to obtain beauty knowledge. Video content is also becoming more and more popular, and businesses can make product demonstration videos, brand promotion videos, user case videos, etc. Take a technology company, for example, whose product demo video posted on YouTube detailed the features and benefits of the product, attracted a lot of potential customers' attention, and the video was viewed and shared very highly. E-books and white papers are suitable for providing in-depth industry analysis and expertise. Companies can produce e-books and white papers on related topics in response to the needs of targeted customer groups, such as the white paper on investment and management issued by a financial institution, which attracted the attention of many investors and enhanced the brand's professional image in the field of finance. Content marketing can not only attract the attention of consumers, but also improve brand awareness and reputation. Through the dissemination of valuable content, consumers have a greater recognition of the professionalism and credibility of a business and are more willing to choose its products or services. At the same time, quality content is easily shared and disseminated by users, further expanding the influence of the brand. According to the survey, content marketing leads to several times higher customer conversion rates than traditional advertising because consumers develop a deeper sense of identity and trust in the brand when they access valuable content.

3.3 Experience Marketing

Experience marketing focuses on providing consumers with unique experiences in which they experience the value and charm of a product or service. Companies can achieve experiential marketing by organizing events. For example, car brands often hold test drives, allowing consumers to drive the car in person and experience the performance, handling and comfort of the vehicle. During test drive activities, companies can also set up professional explanations and guidance to allow consumers to better understand the product features. Experiential marketing is also an effective way, such as when a home brand opens an experiential store, where the home product is set into a real home scene, allowing consumers to experience the effects of the product in real life. Consumers can feel the different styles of home matching in the experience store and make better purchasing decisions. Providing personalized services is also an important part of experience marketing. Businesses provide consumers with a customized product or service experience based on their needs and preferences. For example, a travel company provides customers with personalized travel route planning, customizing their own travel itinerary according to their interests, time and budget, so that customers can have a unique experience during the travel process. Experience marketing can enhance the emotional connection between consumers and brands, increasing consumer satisfaction and loyalty. When consumers get a good feeling in the experience, they are more impressed with the brand and more likely to become loyal customers of the brand. At the same time, consumers will also be willing to share their good experience with others, thereby bringing word of mouth to the brand. According to research, customer loyalty gained through experiential marketing is 20% -30% higher than customer loyalty obtained through traditional marketing methods, because experiential marketing gives consumers a deeper understanding and recognition of the brand.

The marketing road of Coca-Cola

4.1 Product strategy - Maintain classic products and promote category expansion

In 1985, in response to the competitive pressure of PepsiCo, Coca-Cola tried to replace the traditional formula with a new formula, but in less than a month, countless complaints and criticism from all over the world, the sales of the new version of Coke was far less than expected, under the pressure of public opinion, the company decided to resume the production of the traditional formula. The "marketing mistake of the century", as it has been called, has boosted sales of classic Coca-Cola. At the same time, the Coca-Cola Company has always adhered to the multi-category, multi-brand strategy and achieved success. Through market research, the Innovation Center of Coca-Cola Company identified 32 possible occasions for consumption of beverages, and accordingly developed sports, water, tea, coffee, health, and family products, and continued to expand the global soft drink blue ocean market.



Figure 1 Family photo of Coca-Cola products

4.2 Brand strategy - Create a mysterious image and speak for the national culture

For more than 130 years, the Coca-Cola Company has carefully guarded the original recipe for its classic Coca-Cola product, only a single copy of which survives, locked away in an underground vault at a trust company in Georgia. The formula has become the top secret of the Coca-Cola Company. It is this mysterious formula that keeps consumers highly loyal to the Coca-Cola brand. Today, Coca-Cola is a typical representative of American culture. During World War II, classic Coca-Cola products became an important military supply for the U.S. army, and after the war, almost every president of the United States was a loyal spokesperson for the Coca-Cola brand, and Coca-Cola also became a must-have drink for voters in American election campaigns. At the same time, since the establishment of the company, Coca-Cola has continued to invest huge amounts of money in advertising, and continuous advertising marketing has greatly promoted Coca-Cola's brand recognition around the world.



Fig. 2 Coca-cola product chart

4.3 Marketing strategy - insist on low price sales and enter the global market

No matter which market in the world, the Coca-Cola Company requires that the product must be affordable for everyone, so the Coca-Cola Company has always promoted the low price strategy. In the African region, because the residents' income is too low, they have also introduced 2 liter and 3 liter large bottle packaging to achieve small profits and high sales. So, even during the Great Depression, or in third World countries, Coca-Cola's sales were still very good. The Coca-Cola Company has shown a strong sense of opportunity in the historical expansion of globalization. In 1978, on the same day that China and the United States announced the establishment of diplomatic relations, the Coca-Cola Company announced its return to the Chinese market, becoming the first international consumer goods company to return to China, and established its first bottling plant in Beijing in 1981.

Global marketing strategy is the key factor for the success of Coca-Cola Company. Its strategy is mainly reflected in three aspects: through global standardized products, the formation of a unified market in the world, in order to obtain economies of scale and experience effect; Make use of cost differences among countries, carry out global division of labor, and build regional advantages; Through global operation, global coordination and global competition, it brings a strong scale advantage to the Coca-Cola Company and further strengthens the brand moat.

The logic behind Coca-cola's global marketing is profound. On the one hand, it adheres to classic formulas, strengthens the core values of the brand at the product level, and ensures brand recognition by a unified global taste. On the other hand, a low price strategy is not simply low price dumping. For example, in emerging markets, by optimizing the supply chain, reducing costs in local canned production, entering at relatively low prices, and rapidly grabbing market share, while using large-scale advertising and sponsorship of sports events to enhance brand awareness, balancing profitability and brand image. From the perspective of brand culture cultivating consumer loyalty, Coca-cola's century-old happiness and sharing culture is deeply rooted in the hearts of consumers. Marketing activities such as "Nickname Bottle" and "Lyrics Bottle" closely connect the brand with consumer life scenes, stimulate emotional resonance and strengthen loyalty.

THE COCA-COLA COMPANY AND SUBSIDIARIES
Operating Segments and Corporate
(In millions)

Three Months Ended

	Net Operating Revenues ¹			Operating Income (Loss)			Income (Loss) Before Income Taxes		
	June 28, 2024	June 30, 2023	% Fav. / (Unfav.)	June 28, 2024	June 30, 2023	% Fav. / (Unfav.)	June 28, 2024	June 30, 2023	% Fav. / (Unfav.)
Europe, Middle East & Africa	\$ 2,339	\$ 2,188	7	\$ 1,252	\$ 1,133	11	\$ 1,267	\$ 1,147	10
Latin America	1,650	1,378	20	920	797	15	887	802	11
North America	4,812	4,367	10	1,312	1,216	8	1,324	1,227	8
Asia Pacific	1,512	1,567	(4)	647	673	(4)	648	675	(4)
Global Ventures	768	765	0	92	78	19	94	78	20
Bottling Investments	1,539	2,042	(25)	98	122	(20)	548	577	(5)
Corporate	30	30	1	(1,689)	(1,618)	(4)	(1,740)	(1,626)	(7)
Eliminations	(287)	(365)	22	—	—	—	—	—	—
Consolidated	\$ 12,363	\$ 11,972	3	\$ 2,632	\$ 2,401	10	\$ 3,028	\$ 2,880	5

Source of data: company financial reports

1. Suggestions for implementing innovative marketing methods

5.1 Focus on consumer needs

Focusing on consumer needs is central to implementing innovative marketing methods. Companies should gain insights into changing consumer demands in a variety of ways. Market research is one of the most common methods. Companies can regularly conduct surveys, interviews and other research activities to understand consumers' expectations, preferences and use experiences for products or services. For example, a food company found that consumer demand for healthy foods was growing through a questionnaire, so it adjusted its product strategy, launched a series of low-sugar, low-salt, and no-added healthy ones, and introduced them to the market through innovative marketing methods. Consumer feedback is also an important source of information, and enterprises can collect consumer opinions and suggestions in a timely manner by establishing customer feedback channels, such as online customer service, comment box, social media interaction, etc. For example, an e-commerce enterprise learned that consumers pay more attention to logistics speed and packaging by analyzing customer feedback on social media, so it optimized the logistics distribution process, adopted a more environmentally friendly and aesthetically pleasing packaging design, and improved consumer satisfaction. Focusing on market trends and competitors' dynamics also helps companies better grasp consumer demand. Companies should pay close attention to industry development trends, the application of new technologies, and the marketing strategies of competitors to discover potential changes in consumer demand and market opportunities. For example, with the rise of the smart home market, some traditional home appliance companies have paid attention to market trends, The timely launch of smart home appliance products and the adoption of innovative marketing methods, such as cooperation with smart home platforms and experiential marketing, have met the needs of consumers for intelligent living and occupied a competitive advantage in the market. By paying attention to the changes in

consumer demand, enterprises can adjust their marketing strategies in a timely manner, innovate marketing methods, and provide products and services that are more in line with consumer needs, thereby improving marketing effectiveness and market competitiveness.

5.2 Cultivate innovative thinking

Cultivating innovative thinking is the key to enterprises implementing innovative marketing methods. Companies can improve their employees' ability to think creatively through training. The training can include innovation theory, methodology, and case studies to give employees an understanding of the importance and methodology of innovation. For example, organize an innovation thinking workshop, inviting a professional innovation tutor to teach employees the techniques and tools of innovation thinking, such as brainstorming, mind maps, etc., and give employees practical case studies on how to apply innovation thinking to marketing. Encouraging employees to innovate is also an important way to foster innovative thinking. Enterprises can establish an innovation incentive mechanism to reward employees who come up with innovative marketing ideas and proposals, such as bonuses, promotion opportunities, honor certificates, etc., to inspire employees to innovate. An Internet company, for example, established the Innovation Star award, which recognizes and rewards employees every month for their outstanding performance in marketing innovation, which enables employees to think proactively about and experiment with new marketing methods. Creating an innovative corporate culture also helps to cultivate innovative thinking. Companies can promote a culture of openness and inclusiveness that encourages employees to be brave enough to try new things and not be afraid to fail. Google, for example, is known for its corporate culture that encourages innovation, with employees having 20 percent of their working hours free to explore projects they are interested in. This culture inspires employees' potential to innovate and leads to many innovative products and marketing methods for the company. In addition, companies can organize employees to participate in industry seminars, innovation forums and other activities to broaden the horizons of employees, understand the latest developments and innovative trends in the industry, and provide external support to cultivate innovative thinking. By cultivating the innovative thinking capabilities of employees, enterprises can continuously introduce novel marketing methods, adapt to market changes, and enhance the innovative capabilities and market competitiveness of enterprises.

5.3 Strengthen teamwork

Strengthening teamwork is essential to implementing innovative marketing approaches. Enterprises can establish cross-departmental teams to bring together people from different departments such as marketing, product research and development, and customer service to jointly carry out marketing innovation work. Cross-departmental teams can take full advantage of the professional strengths of various departments to share resources and work together. For example, when launching a new product, the marketing department is responsible for developing the marketing strategy. The product research and development department provides product technical support and innovation highlights, and the customer service department collects customer feedback and provides suggestions for improving products and services. Through the cooperation of cross-

departmental teams, it can better meet consumer needs and improve the market competitiveness of products. Conducting team building activities is also an effective way to strengthen team cooperation. Enterprises can organize team development training, outdoor reunion activities, etc., to enhance communication and trust among team members and improve team cohesion. For example, a company organizes team members to participate in outdoor expeditions, during which team members need to collaborate with each other and overcome difficulties together, which not only enhances the feeling among team members, but also improves the team's ability to collaborate at work. Establishing effective communication mechanisms is the foundation of teamwork. Enterprises can ensure that information is clear among team members and keep abreast of project progress and issues by holding regular team meetings and using project management tools. For example, using item management tools like Trello, team members can update task progress in real time, ask questions, and solve solutions, facilitating collaboration and communication among team members. In addition, companies can encourage knowledge sharing and exchange of experience among team members to promote the overall ability of the team. By strengthening team cooperation, enterprises can better integrate resources, leverage the wisdom and strength of the team, drive the implementation of innovative marketing methods, and improve marketing effectiveness and corporate performance.

Conclusion

Innovative marketing methods are undoubtedly the core key elements of business success. In today's complex, dynamic and competitive business environment, companies adopt innovative marketing methods, It can enhance its competitiveness in a comprehensive way, more precisely meet the changing and increasingly diverse and individualized needs of consumers, and strongly promote the continued development and growth of the enterprise.

Focusing on consumer needs is the cornerstone of innovative marketing. Companies should always maintain a keen market insight, and use scientific market research methods such as questionnaires, in-depth interviews and big data analysis to gain insights into the dynamics of consumer demand, the evolution of consumer habits and potential market trends. For example, market research data from Nielsen shows that consumers' interest in healthy and environmentally friendly products has continued to rise in recent years, and companies can adjust their marketing strategies to launch green and healthy products that meet consumer needs and bring them to market through innovative marketing methods. Only by innovating closely around consumer needs can companies truly win the favor and loyalty of consumers and thus gain a place in the market.

Cultivating innovative thinking is the source of motivation for innovative marketing. Enterprises should actively create a culture of innovation and encourage employees to be brave enough to try new marketing ideas and methods. The innovative potential of employees can be stimulated through internal training courses, the organization of innovation seminars and the establishment of innovation incentive mechanisms. Google, for example, has always advocated a culture of innovation, and employees have 20 percent of their working hours free to explore innovative projects. This environment that encourages innovation has encouraged Google to continually introduce novel strategies in areas such as ad marketing, such as precision advertising based on user interest, which have brought tremendous business value to the company. Cultivating employees'

ability to think creatively can provide a constant stream of ideas and inspiration for the company's marketing innovations, so that the company can always maintain a leading position in the fierce market competition.

Strengthening teamwork is an important guarantee for innovative marketing. The marketing activities involve many departments of the enterprise, including the marketing department, R & D department, sales department, customer service department, etc. There is a need for close collaboration and efficient communication between various departments to ensure the smooth implementation of innovative marketing strategies. For example, during the promotion of new products, the marketing department is responsible for formulating marketing strategies and promotional programs, the R & D department provides product technical support and innovation highlights, the sales department is involved in bringing products to market and communicating with customers, and the customer service department collects customer feedback and provides suggestions for improving products and services. By establishing cross-departmental teams, clarifying the responsibilities and collaboration processes of each department, and strengthening team-building activities, such as team development training, regular communication meetings, etc., we can enhance team cohesion and collaboration capabilities and jointly promote innovative marketing efforts.

Continuous learning is the key to the continual development and refinement of innovative marketing methods. The concepts, techniques and means of marketing are constantly being updated, and companies must maintain their enthusiasm and motivation for learning. You can keep up to date on the latest developments and trends in innovative marketing methods by participating in industry seminars, training courses, and reading professional books and journals. At the same time, enterprises should also pay attention to the success stories of outstanding enterprises at home and abroad, learn from their advanced marketing experience and practices, and apply innovative applications in their own realities. For example, Coca-cola keeps learning and trying new marketing methods, from traditional advertising to social media marketing, content marketing, etc., and always maintains the vitality of innovation in the field of marketing, so that its brand in the global scope to maintain a very high visibility and reputation.

In short, to achieve commercial success in the fierce market competition, enterprises must attach great importance to the application of innovative marketing methods. Focusing on consumer needs, fostering innovative thinking, strengthening teamwork and continuous learning are key elements of an innovative marketing strategy. At the same time, enterprises should actively learn the successful experience of outstanding foreign enterprises and continuously explore innovative marketing paths suitable for their own development, so as to adapt to market changes, meet consumer needs, enhance corporate competitiveness, and achieve sustainable business development goals. Only in this way can enterprises win in the increasingly complex and changeable market environment and create more brilliant business achievements.

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Theoretical construction and application path of cultural tourism metaverse empowering rural revitalization

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Abstract

Empowering thinking with art, theatrical colony groups, and promoting rural revitalization and development. Tapping into the new opportunities of intangible cultural heritage in meta-universe application scenarios to build an immersive rural tourism complex. Environmental theatre produced in the context of intangible cultural heritage provides a concrete implementation path for the revitalization and development of rural cultural tourism industry. Rural environmental theater is a new type of cultural consumption product under the theater space. Using environmental theater as a means of expression, it brings an immersive theater experience to the audience with a flowing and free tour. This study takes Lacan's three worlds theory as the theoretical research basis to explore the theoretical construction of the meta-universe of cultural tourism. And based on the three-whole education system in the context of university industry, academia and research, and based on the educational characteristics of universities, it integrates industry, academia and research with the development of rural culture and tourism in depth, so as to realize the purpose of promoting the new development of rural culture and tourism industry, and boosting the development of rural revitalization in the new era.



Full Text Article



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Keywords: Metaverse, intangible cultural heritage, environmental drama, industry-education integration, rural revitalization

Research Background of Cultural Tourism Metaverse

The Metaverse is a virtual world created by integrating a series of current digital technologies. It integrates technologies such as the Internet of Things, cloud computing, blockchain, artificial intelligence, big data, and brain-computer interfaces. It enables virtual platforms to map and interact with the real world, and is a digital living space for a new social system. The Metaverse is based on

the immersive experience provided by XR technology and digital twin technology to form a virtual world that maps and interacts with the real world. (Jian, P,2017) The Metaverse is a highly immersive and sustainable three-dimensional space-time Internet, including digital twins, virtual natives, and virtual-real symbiosis. The Metaverse is closely integrated in the economic system, social system, and identity system, allowing users to produce and edit content in the virtual world.

The Cultural and Tourism Metaverse is the product of the combination of the cultural and tourism industry and digital technology. The rise of the Metaverse and related digital technologies is an opportunity for the cultural and tourism industry to undergo digital transformation and further development. The Metaverse can help people break through the limitations of time and space and gain a more diverse cultural and tourism experience. At the same time, the metaverse also has social attributes and economic systems. Integrating the metaverse into the cultural tourism industry can not only achieve higher social and economic benefits, but also optimize the ecology of the cultural tourism industry, extend the value chain, industrial chain, and resource chain of the cultural tourism industry, and make the development of the cultural tourism industry present information and digital characteristics.

Metaverse technology helps to build a path for the systematic protection of rural intangible cultural heritage. On the one hand, in the multi-dimensional space of the cultural tourism metaverse, the process of cross-temporal and spatial performances is continued, and space is exchanged for time, and the protection of static and passive sealed intangible cultural heritage is transformed into a dynamic and living protection method, thereby enhancing the recognition of the intangible cultural heritage subject to the metaverse technology and avoiding the weakening and alienation of intangible cultural heritage in commercial development.(Yu, C., Ding, K., & Luo, S,2019)

This article attempts to systematically explore these issues. What is the theoretical logic of the metaverse empowering the cultural tourism industry? In what aspects can the metaverse drive the innovation of the cultural tourism industry? Therefore, this article proposes environmental drama as an application path for rural revitalization. Environmental drama is based on China's excellent traditional culture and intangible cultural heritage, based on the characteristic villages at the junction of urban and rural areas, and closely linked to customs and natural scenery. In the era of digital economy, consumers' demand for personalization and customization is becoming more and more obvious. The rural cultural tourism industry needs to understand tourists' needs more finely and provide personalized services and experiences. Immersive environmental drama is emotionally oriented to inspire tourists to pay for the rural cultural tourism economy.

The development of the cultural tourism metaverse presents the intersection of multidisciplinary content, and needs to absorb knowledge from disciplines such as tourism, culture, history, archaeology, anthropology, computer science and media. In order to create new and unique cultural tourism experience methods, it promotes tourists' new understanding of cultural tourism content in the past, present and future.

The cultural tourism metaverse breaks through the geographical and temporal limitations of cultural tourism scenes and connects cultural tourism resources and cultural content across time and space. It allows tourists to visit rural sites that are geographically or physically inaccessible. Tourists can also connect socially through the cultural tourism metaverse, whether in the virtual world or in the real world, to share experiences, knowledge or establish cultural tourism interest communities.

Rural environmental drama equipped with the cultural tourism metaverse presents the following characteristics. (Wang, Y,2018) First, it has cultural and educational significance. The cultural tourism metaverse provides tourists with cross-temporal and spatial content behind the real scene. It allows tourists to experience cultural stories in an immersive and highly interactive way, witness rural intangible cultural events and customs, and participate in them through scene-based methods. Tourists experience through interactive activities, virtual simulations or games, and this participation is more attractive. Personalized cultural tourism narratives can give tourists a deeper understanding of rural cultural tourism.

Secondly, in the cultural tourism metaverse, tourists can customize personalized experiences and services according to their preferences. For example, tourists can customize the appearance and behavior of their characters, choose the cultural and historical places they want to visit, choose virtual travel partners and virtual tour guides, customize the language and text used in scene travel, and personalized cultural story narrative experience.

Finally, immersion and interactivity are the core features of the cultural tourism metaverse. Through the construction of highly realistic virtual cultural tourism scenes, sophisticated cultural tourism story narratives, multi-sensory interactive feedback, and seamless switching of virtual and real cultural tourism scenes, tourists can experience immersively and explore tourist destinations and cultural tourism service projects. Unlike the passive cultural tourism experience in the real world, tourists in the cultural tourism metaverse can actively participate in and explore the virtual world. Interact with the cultural tourism scenes, characters and cultural storylines in the virtual world in an interactive way, and create and record your own experience in the process.

Lacan's Three Realms Theory and the Theoretical Construction of Cultural Tourism Metaverse

This paper innovatively uses Lacan's three-realm theory to analyze metaverse tourism. The three-realm theory refers to the real world, the imaginary world, and the symbolic world. It covers multi-level discussions from individuals to groups, from technical details to social culture. The three-realm theory reveals how humans construct themselves and the world through imagination, language, and symbols, and how these construction processes affect human cognition and behavior. The three-realm theory helps to fully understand the structure of the metaverse and explore how metaverse tourism affects the cultural communication, values, and establishment of social order in the metaverse space.

The imaginary world, the real world, and the symbolic world represent different cognitive levels and states of existence. (Wan, M., Zhang, F., & Wang, L,2023)The imaginary world is the subject's initial cognition and imagination of the self and the external world; the real world represents an existence that transcends language and symbols and cannot be fully grasped; the symbolic world is the process of constructing and maintaining social order and interpersonal relationships through language, symbols, and cultural systems.

From the perspective of the tourism metaverse, first of all, the imaginary world focuses on user experience, the real world focuses on technical implementation, and the symbolic world focuses on social norms. Specifically, the imaginary world can interpret tourists' free creation and fantasy experience in metaverse tourism. Visitors get rid of the physical limitations of reality and freely

explore unknown scenes and experience fantasy adventures in the virtual world. (He, J., & Zhang, Y,2023)For example, in the metaverse space with the theme of intangible cultural heritage stories, visitors can interact with characters and participate in the storyline. This experience fits the subject's pursuit of ideal images and situations in the imaginary world.

Secondly, the symbolic world helps to analyze the cultural symbols, rules and language systems in the metaverse cultural tourism. The metaverse cultural tourism is constructed through specific visual symbols, interaction rules and narrative language. These symbolic elements convey cultural significance and shape tourists' cognition. For example, symbolic symbols such as the architectural style and costumes and props of the metaverse scenic spot will convey cultural information of a specific era. The process of tourists interpreting these symbols is to participate in the construction of cultural significance in the symbolic world and understand the cultural connotations carried by the metaverse cultural tourism. These factors jointly shape the collective behavior patterns and social interaction methods of users.

Finally, the real world helps to reveal the deep connection between the metaverse cultural tourism and the real world. Although the metaverse is a virtual space, the technical foundation, user behavior and social impact of the metaverse are rooted in reality. The experience in metaverse tourism will also react to the real tourism industry, prompting it to change and innovate, which reflects the potential constraints and support of the real world on metaverse tourism.

In summary, the use of the three-realm theory to analyze the phenomenon of metaverse tourism can trigger reflection and transcendence of the real world. Through the cultural symbols and rules of the symbolic world, we can understand how metaverse tourism inherits, transforms and creates cultural value; (You, X,2023))with the help of the interaction between the imaginary world and the symbolic world, we can analyze the shaping of tourists' values and social cognition by metaverse tourism; from the perspective of the real world, we can explore the changes caused by metaverse tourism in social and economic structure, interpersonal relationships and cultural ecology, and provide a theoretical framework for a comprehensive assessment of the social and cultural significance of metaverse tourism.

The application path of cultural tourism metaverse empowering rural revitalization

The cultural tourism industry integrates virtual reality and augmented reality technologies to create a rich and immersive cultural tourism experience. Cultural tourism scenic spots are built into new cultural spaces in the digital age to provide tourists with experiences beyond reality. For example, through virtual tours, digital exhibitions, real-time interactions, etc., to enhance visitor participation and satisfaction. For example, Tokyo Disneyland in Japan introduced augmented reality technology and launched a metaverse project called "Disney Creation Kingdom". Visitors can use AR glasses to see virtual Disney characters interacting with real scenic spots, and experience a wonderful experience that combines virtuality and reality, which also attracts a large number of tourists. The Louvre in France has launched the Louvre Meditation application in cooperation with a virtual reality company. Users can use VR devices to walk through the Louvre in a virtual space and interact with artworks, creating a deep experience that integrates culture and emotion.

Due to the objective environment of the countryside, it is difficult to build a museum. However, the dissemination of intangible cultural heritage requires museums as an important carrier. Therefore, the Metaverse Intangible Cultural Heritage Museum will become a powerful way to promote rural intangible cultural heritage. Unlike traditional virtual exhibitions that simply restore offline exhibition spaces, the Metaverse Museum has new features such as digital avatar experience, immersive interpretation, strong interactive tours, and virtual social interaction. It is not just an online exhibition, but a digital parallel world that extends from the "online" of the cloud exhibition to the "present". It has the new characteristics of the integration of reality and non-reality, and extends its functions to build a new dimension of "virtual human role", "narrative space", "emotional experience" and "interactive game" experience.

The cultural and tourism metaverse reconstructs the time and space experience for tourists, and also brings breakthroughs in different dimensions to the traditional tourism industry. For example, through digital equipment and digital technology, colorful real scenes, dreamy virtuality, and cross-border interactions are created. The metaverse of offline scenes integrates the digitalization and intelligence of the cultural and tourism industry to achieve the unity of digital economy and metaverse.

The cultural and tourism metaverse is a new cultural product that can fundamentally enhance the soft power of rural culture and promote the prosperity and development of rural cultural and tourism industries. Environmental drama is a cultural and creative industry based on immersive experience. It creates an industry chain of drama clusters and cultivates a new industry of "local culture + drama". Highlight local characteristics, promote the excellent traditional Chinese culture, let traditional villages and new theaters complement each other, and let more people feel the charm of drama culture.

After the epidemic, people's enthusiasm for traveling is high, and their tourism mentality is constantly changing. Tourist destinations have gradually shifted from big cities to villages with cultural and tourism characteristics. It can be seen that the countryside is becoming an important choice to meet people's tourism needs. Compared with the previous tourism needs of "I have seen it, I have been here", tourists now care more about "I experience it, I like it". The Chinese Academy of Social Sciences pointed out in the "Tourism Green Book: Analysis and Forecast of China's Tourism Development from 2022 to 2023" that in the future, third- and fourth-tier cities and rural areas will become the key areas for the strategic transformation of the tourism industry. This is inseparable from the country's vigorous support for rural revitalization and rural tourism industries. In the future, rural tourism will develop unprecedentedly. This also shows that the research on "intangible cultural heritage environmental drama" is resonating with the national rural revitalization strategy. At present, the leisure and entertainment formats of rural cultural tourism are single. Milking, barbecue, picking eggs, picking, etc. in the countryside are authentic and full of childlike rural experiences, but it is difficult for tourists to consume multiple times. When the tourism industry encounters the countryside, it urgently needs to be innovatively reconstructed to enable rural cultural tourism to develop sustainably. In addition, intangible cultural heritage urgently needs more people to participate in the process of social inheritance, especially to get widespread attention from young groups and Generation Z. How to solve the pain points of intangible cultural heritage is also an urgent development issue. The rural cultural tourism industry is facing challenges in a new stage.

How to achieve high-quality development of the tourism industry and demonstrate new concepts and new missions is an important issue.

In view of the current development status of the rural cultural tourism industry, the construction of a drama complex of the intangible cultural heritage metaverse can well meet the whole process and highly realize the demands of design, interaction, and communication. The complex of the intangible cultural heritage metaverse environmental drama includes intangible cultural heritage script killing, intangible cultural heritage camping, intangible cultural heritage amusement park, immersive experience of environmental drama, etc., which can meet the social needs of all age groups. This form of micro-vacation will become a new trend and new development in the quality of rural tourism. Empower with art and use immersive experience as a way to break the circle. Applying immersive experience to different scenes according to local conditions and realizing real experience upgrades is the direction of exploration of art empowering the rural cultural tourism industry. The specific countermeasures and suggestions are as follows.

In the metaverse, we create an immersive theater for intangible cultural heritage. Different from traditional stage shooting technology, we explore the integration of intangible cultural heritage stage play forms and panoramic VR. The performance is centered on the audience, and the characters appear in sequence using sound guidance, so that the performance content is integrated into the space, and the audience can also have an immersive viewing experience. At the same time, we integrate virtual stars, cloud boxes, multi-view and multi-screen viewing and other scientific and technological technologies to help the digital upgrade of intangible cultural heritage stage plays. Empowered by 5G, we enhance the communication effect and help the dissemination of intangible cultural heritage.

Environmental drama takes "culture + technology" as its development strategy, immersive drama art as its method, and the unique concept of environmental drama as its carrier, combining intangible cultural heritage with the concept of "metaverse" to achieve interaction between reality and virtuality. It helps to activate rural resources and promote the high-quality development of rural cultural tourism industry. We combine the supporting technology of the metaverse with the strategy of rural revitalization and promoting intangible cultural heritage to create rural environmental drama with Chinese characteristics. Environmental drama aims to protect and inherit the intangible cultural heritage context and inherit and develop the excellent traditional Chinese culture. The meaning of immersive drama is to organically integrate people and rural culture and create real and meaningful connections.

Environmental drama is rooted in the rich soil of traditional culture, innovates in inheritance, and creates new landmarks for rural cultural tourism. Create a group of drama groups with historical roots, cultural veins, commercial souls, management methods, and famous brands, with the theme of "micro-tourism, slow life", and cultivate a group of good places at the doorstep for the people. It can be seen that environmental drama will collide with urban culture in a stronger spark in the context of cultural confidence given by the era. Cultural confidence is the confidence of a nation in its own culture. Cultural consumption is a kind of consumption based on cultural confidence, using cultural products or services to meet the spiritual needs of the people. Environmental drama will break through the traditional drama creation model, build a new and sustainable ecological industry mechanism, and transform the cultural confidence of intangible cultural heritage into cultural consumption. The consumption mode of the millennial generation has transformed from

commodities to experiences, which caters to the characteristics of the Z generation's pursuit of self-expression and self-realization, and has received widespread attention and dissemination in a short period of time. The rise of the experience economy and the development of science and technology have changed the traditional marketing model, and niche entertainment has gradually been accepted by mainstream consumers. From small script games and escape rooms to large immersive dramas and exhibitions, commercial real estate and cultural tourism destinations have also brought unprecedented attention to the immersive experience entertainment industry.

Environmental drama is based on the script industry that young people love. Through the means of selective cultural tourism experience, immersive drama and rural cultural stories can be cross-border cooperation, which can not only preserve and promote China's excellent traditional culture, but also attract the aesthetic vision of modern people. The script game, with its immersive drama experience, has achieved a dialogue between young people and history. When the audience is interested and reads it, they will further pay attention to and understand the historical and cultural elements contained in the work, the work will have vitality, and the rural culture will be spread. Business is the body and culture is the soul. Environmental drama will use immersive drama to tell the traditional stories of Chinese intangible cultural heritage and show the cultural confidence of the Chinese people.

Immersive drama, with its strong sense of picture and substitution, has an immersive interactive and entertainment experience, which is closer to the preferences of young tourists. China's immersive drama industry is still in its infancy. At present, immersive performing arts formats at home and abroad are building a composite immersive system. It mainly includes two trends. One is hardcore immersion, which focuses on exploring dynamic scene applications of XR virtual and real. The second is to use stories to create emotional immersion and build an immersive cultural and tourism complex. Judging from the current domestic research situation, most of the industrial thinking of art empowerment uses education and social services. For cultural and tourism development, it is still in its infancy. Therefore, it is possible to combine advanced domestic and foreign experience to build an immersive micro-realistic sensory theater, which is of great theoretical and practical value. Emotional immersion is mainly to create an immersive drama complex to attract young consumers of the 80s, 90s, and 00s and family-based customers. It includes immersive scenic spots, immersive cultural and tourism towns, and environmental dramas. Tourists are more willing to experience traditional cultural and artistic creativity and appreciate local culture in environmental dramas. As a result, the pace of local agricultural modernization can be enhanced and new vitality can be injected into agricultural production. In the past rural development and revitalization, the local intangible cultural heritage was often not given enough attention, so that when promoting its own image to the outside world, its own characteristics were not shown. Therefore, to incorporate art into the revitalization of rural culture, we must first explore the local intangible cultural heritage, combine local culture with art forms to show its characteristics, and rebuild the connection between man and nature, and man and art. In order to incorporate the empowerment of intangible cultural heritage into the construction of rural cultural tourism, we must grasp the current status and future development direction of rural development, grasp the core of rural culture and the core of local culture, and make an overall layout for rural construction and development, and then set the artistic atmosphere and tone, so that art can be integrated into rural revitalization.

Immersive scenic spots are developed from tourism performances, and are a successful example of tourism telling cultural stories and culture using the tourism stage. In recent years, more and more well-known scenic spots have launched performance projects that are almost all labeled "immersive": Ningbo Old Bund Historic District staged an immersive performance, and Zhejiang Jiande launched a large-scale immersive live performance "Jiang Qingyue Near People". It can be seen that "immersion" is becoming a strategy for tourism performance projects to satisfy the audience experience. Many cultural and tourism towns in China have beautiful scenery, but lack cultural core. What cultural and tourism towns need to do is for players and consumers to enter the situation and forget their original identities, so as to achieve true emotional immersion. Therefore, rural cultural and tourism towns should focus on immersive story lines to allow tourists to have a deeper experience. The fundamental reason why central and western cities such as Xi'an, Chengdu, and Guiyang can become Internet celebrity cities and frequently go out of the circle is the innovation of business formats. The rapid improvement of Henan's cultural soft power is also mainly due to the integrated development of culture and tourism, feeling the artistic creativity of traditional culture in drama and appreciating local culture. Henan Environmental Drama is located in Zhengzhou, Henan Province, covering a total area of 622 acres. (Fu, L,2023)Before development, it was a rural area. It will be open to tourists from 2021. Since then, a drama settlement group with the ultimate goal of rural revitalization has been opened, and more people have learned about Henan culture by telling stories about "land, food, and inheritance". Henan insists on shaping tourism with culture and promoting the integrated development of culture and tourism with tourism. From "Tang Palace Night Banquet" to "Paper Fan Scholar" to the dance "Luo Shen Shui Fu", more and more children are playing the word game of Feihualing; the costume photos of traveling back to the Han and Tang Dynasties are all the rage; the restoration of cultural relics in the Forbidden City has also aroused heated discussions. Henan culture has frequently gone viral, allowing audiences across the country to feel the unique cultural charm of Henan. The success of Henan's rural revitalization is not accidental, but is the result of the interweaving and interaction of many factors such as culture, technology, policy, market, and creation. Looking back, people find that it is the cultural spirit of the Chinese nation that can soothe their souls. The genes of intangible cultural heritage may be dormant, but they will not always be awake, which is also the charm of Chinese culture.

The industry-education integration model of universities helps rural revitalization

In today's era of great cultural prosperity that advocates intangible cultural heritage and cultural confidence, environmental drama, as an excellent carrier, integrates the innovative development of industry, academia and research with rural revitalization, which is a win-win effect. The rapid development of industry-university-research integration has provided new impetus for the tourism industry. New changes and trends require the tourism industry to continuously increase its efforts in technology and product innovation to meet the public's demand for high-quality and diversified tourism products.

For higher education, in-depth cooperation can be carried out on the integration of industry and education, and scientific research projects can be transformed into teaching practice projects.

Taking the docking villages as the starting point, strengthening the characteristics of school running, based on the needs of economic and social development, promoting the integration of industry and education, implementing school-enterprise cooperation, and creating a path to continuously improve the ability to serve regional economic development. (Shi, P., Wang, Y., & Li, Z,2022)The tourism industry in the new development pattern is an important engine to drive the coordinated development of related industries and promote the growth of the national economy. It is the main force to promote consumption to drive domestic demand, promote the domestic circulation, and drive the domestic and international dual circulation. It is also an important industry to further enrich the spiritual and civilized life of the masses and enhance their sense of happiness and gain.

With the transformation of economic industries, the proportion of the tertiary industry that enhances the soft power of cities has increased year by year. Among them, cultural and creative design services have become a rising star in the tertiary industry. At present, the National Bureau of Statistics has released the operating income data of cultural and related industries above designated size in the first half of 2020. According to a survey of 60,000 cultural and related industries above designated size nationwide, in 2020, the above-mentioned enterprises achieved operating income of 9851.4 billion yuan, of which creative design services were 1564.5 billion yuan, an increase of 11.1%; cultural consumption terminal production was 1880.8 billion yuan, an increase of 5.1%. From the data results, we can intuitively feel the driving effect of cultural creativity on consumer demand.(Zhang, B,2022)

Environmental drama incorporates art into rural construction, helps rural revitalization, and achieves the transformation goal of sustainable development. Immersive drama art is a medium that adjusts the connection between economy, culture and natural ecology. Promoting the development of rural tourism can not only increase the economic income of villagers, but also show the local cultural characteristics of the countryside. This is a sustainable and interactive process.

The purpose of incorporating the production, study and research of higher education into rural construction is to revitalize rural development. At the same time, incorporating the intangible cultural heritage metaverse into rural revitalization is a sustainable and interactive process. Here, art can be used as a medium to adjust the connection between economy, culture and natural ecology and promote the development of rural tourism. By expressing culture through artistic forms, the characteristics of rural culture can be displayed while increasing the economic income of villagers.

The purpose of intangible cultural heritage empowering the integration of rural cultural and tourism industries is to integrate cultural arts and tourism, and produce a strong economic effect under the influence of drama art. It will give new vitality to traditional cultural and tourism products and the tourism industry, which will be conducive to the formation and development of new tourism formats. At the same time, in the process of the formation and development of new formats for rural revitalization, the income problem of rural farmers can also be solved, and then under the development of the overall environment and tourism opportunities, the added value of agriculture can be improved, thereby giving new vitality to agriculture and providing a strong driving force for agricultural development.

Conclusion

Intangible cultural heritage environmental drama tells the excellent traditional Chinese culture, attracts audiences through immersive drama, combines immersive drama with the rural

revitalization strategy, and creates environmental drama with rural characteristics. Incubate environmental drama brands, keep up with the pulse of the times, and achieve cultural innovation. It can not only bring immersive experience to tourists, but also bring sustainable economic benefits to the rural cultural tourism industry. Applying immersive experience to different scenes according to local conditions and realizing real experience upgrades is the direction of exploration of art empowering China's cultural tourism industry. In the future, environmental drama will help strengthen the construction of higher education talent teams. Offline and online two-pronged approach, adhere to creative transformation and innovative development, strengthen intangible cultural confidence, and solidly promote the formation of a system of inheritance and development of excellent traditional Chinese culture. Strive to enhance cultural soft power and influence, and continuously enhance the vitality and influence of rural intangible cultural heritage.

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Conflict of Interest

The authors declare no conflict of interest.

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Analyzing the uniqueness of the child's perspective in Chi Zijian's novels from the perspective of narratology

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Abstract

Born between the white mountains and the black waters, Chi Zijian is a unique figure in the contemporary Chinese literary world. A review of Chi Zijian's novels reveals that nearly half of them adopt a child's perspective for narration. By depicting the world through the eyes and mindset of a child, this narrative approach has had a crucial impact on her writing style. This article will analyze the uniqueness of the child's perspective in Chi Zijian's novels from a narratological perspective, summarizing the textual structural characteristics and narrative features of Chi Zijian's child perspective by combining three aspects: person narration, gender characteristics, and individual characteristics. The dynamic change of the narrative perspective adds tension to the text, which is a change in aesthetic expectations and also a spiritual cleansing.



Full Text Article



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Keywords: Chi Zijian, Child's Perspective, Unique, Narratology

Introduction

Since the 1980s, Chi Zijian has made a splash in the literary world with her piece *"The Fairy Tale of the Arctic Village"* marking the beginning of her over thirty-year writing career. Over the course of more than thirty years, Chi Zijian has continued to write tirelessly, becoming a uniquely positioned author in the realm of contemporary literature. Regarding Chi Zijian, the writer Su Tong has made a classic description: "Probably no other writer has maintained such a consistent creative rhythm, a stable aesthetic pursuit, and a bright and clear literary quality for over twenty years of writing as Chi Zijian has." This creative style is particularly evident in Chi Zijian's early works.

In her early works, Chi Zijian preferred to view the world through the eyes of a child, depicting with simple words the snowy small town of her memories, the trivialities of her childhood, and the warmth and coldness of human relationships as she imagined them. In Chi Zijian's writings, works narrated from a child's perspective make up a significant portion, including *"The Fairy Tale of the Arctic Village"* *"The Misty Moon Cowshed"* *"The Sleeping Daguqigu"* *"The Plague of the Luo Suo"*

River" and *"Primitive Landscapes"* all of which use a child's perspective to tell their stories. Additionally, *"Sunset at the Bowl Kiln"* *"The Reverse Sprite"* and *"Meinu on the Shore"* also insert a child's perspective within narratives that employ multiple viewpoints. Thus, the child's perspective has become an important narrative angle in Chi Zijian's works.

Perspective, originally a term in painting, refers to the need for painters to choose an appropriate angle to depict things when observing them. Later, it was borrowed by literary narration, emphasizing the angle from which the writer observes and tells the story in their work. Mr. Yang Yi once said, "Perspective often goes unspoken, yet it is ubiquitous." If you read a work with an awareness of perspective, you will feel that there is no place without perspective. It is evident that perspective is a "problem where pulling one hair will move the whole body," and its choice directly affects the aesthetic effect of the text. The perspective of childhood, as a special viewpoint outside the traditional narrative classification, refers to depicting the world through the eyes and mindset of a child, using a child's tone to make aesthetic judgments about the world that align with the child's psychological and cognitive patterns. Here, "children" generally refers to individuals in a stage of physical and mental immaturity, corresponding to the psychological concept of "children."

The perspective of children was first utilized by Mr. Lu Xun in *"Nostalgia"*. With the development of narratology, many writers have paid attention to the topic of children's perspective. In contemporary times, the use of children's perspective by writers such as Mo Yan, Su Tong, and Tie Ning each has its own characteristics. However, Chi Zijian's children's perspective is unique. This poetic quality comes from her Childhood experiences, creative choices, female perspective, and individual creation.

The Impact of Childhood Experiences

As Chi Zijian said in *"The Fairy Tales of the Arctic Village"*: "Without innocence, there is no childhood; without childhood, there would be no mature and fulfilling today."

The childhood experiences of a writer have a significant impact on their creation. As a female writer born in the northernmost region of China, Chi Zijian's works are established with a unique character in the history of China's new literature development. However, her initial choice of a child's perspective was not deliberate. The carefree life of her childhood was unforgettable, filled with fantasies and youthful vitality. Childhood seemed like a spring that constantly bubbled forth, and thus *"The Fairy Tales of the Arctic Village"* came into being. This autobiographical work sees Chi Zijian herself as the innocent and playful girl "Yingdeng," observing the entire world with wide eyes. Chi Zijian has said, "I like to narrate stories from a child's perspective. This perspective makes me feel that fresh, innocent, and simple literary atmosphere can spread freely like morning mist... Of course, this is probably related to my childhood experiences." During her childhood, Chi Zijian lived with her grandmother for many years in the Great Xing'an Mountains, which were both muddy and full of spring light. There were wet summer sunsets, vast snowstorms, reflections of houses and cooking smoke, as well as Soviet grandmothers and songs. Her childhood life laid the foundation for the rest of her life and her subsequent writing.

The personal temperament of the writer is also very important in choosing the perspective of children. Early influenced by Russian literature of suffering, Chi Zijian viewed literature as a

spiritual activity with religious feelings (according to Zhou Jinglei's interview), aiming to achieve a compassionate effect in the end. Although she often writes about religion, suffering, and death in her novels, everything she describes is spiritual, death is "full of vitality," and the endings of suffering always carry a "warm" color. Known for her "warm writing," Chi Zijian's imagery is rough, but her brushwork is delicate; the mood is sad, yet there are a few strands of warmth amidst the desolation. In the ending of *"Duck Like a Flower"* although the fugitive is still sentenced to death, the duck standing on the grave, looking like a beautiful flower, brightens the entire story filled with sadness. In *"Sunset at the Bowl Kiln"* the appearance of the complete bowl shining with a dark red luster at the end casts a warm sunset-like hue over the less-than-perfect ending. This kind of personal ethical belief, similar to religion, is actually a reflection of her respect and care for life, influencing her choice of narrative in her novels. What can be seen is that Chi Zijian constructs not a fairy-tale-like paradise, but a rural society filled with misfortune and heartache. It's just that several layers of suffering are lightly covered by Chi Zijian's warmth and goodwill.

Furthermore, choosing the perspective of a child can be seen as an inevitable choice for writers to reminisce and look back on past life experiences. Nostalgia for modern people has shifted from reminiscing and reliving the past to seeking answers from the past, and then looking towards the future. Cassirer once stated in *"An Essay on Man"* that memory is not a simple reproduction of past events; it is a creative reconstructive process. This is not merely a narrative of recollection, but rather, based on memory, through the author's processing, a new world is constructed. The author's recognition of the childlike spirit and this conscious exploration are always inseparable. Just as in the modern jungle of material desires, Chi Zijian looks back on her hometown and childhood with a sense of scars. When the harmonious ecological environment is crushed by the overwhelming modern industrial train, the pure truth, goodness, and beauty in people's hearts are gradually eroded by modern material civilization. She urgently wants to return to childhood, back to that pure and sincere sanctuary in her memory.

Flexible narrative approach

At the narrative level, Chi Zijian often employs different narrative perspectives based on the needs of the plot, combining the viewpoint of children to tell stories, which gives the stories a unique poetic flavor. Combining Chi Zijian's novels from a child's perspective, and categorizing them by perspective, there are roughly three types: one is the third-person narrative perspective, where the narrator tells the story from the viewpoint of an observer, often creating an image of an innocent child and recounting their life and stories from childhood. This type is most widely used in Chi Zijian's works, such as *"Sunset at the Bowl Kiln"* *"The Misty Moon Cowshed"* *"The Sleeping Daguqigu"* *"The Plague of the Luo Suo River"* etc. Another is the first-person narrative perspective, where the narrator tells the story from the viewpoint of a character in the story, reminiscing about childhood life, such as *"The Fairy Tale of the Arctic Village"* *"Primitive Landscapes"* *"Come See the Snow, Friends"*. The third type involves the alternating use of first-person and third-person perspectives, which can also be seen as a fluidity of perspective, or a blend of omniscient and limited perspectives, such as *"All the Nights in the World."*

Firstly, from the pure perspective of a child in the first person, there exists only one kind of gaze. It is the perspective of the events the child is experiencing. Since a child's perspective often focuses on everything in the world, but is not coherent in thought, their gaze is frequently drawn to other things in front of them, leading to breaks from the previous narrative. This fragmentation is presented in the text as a composition of disjointed fragments. This is particularly evident in Chi Zijian's acclaimed work *"The Fairy Tale of the Arctic Village"* "Stars, stars, they're everywhere in the sky. Which one am I? Mom said that when I was born, she dreamed of a star falling into her arms. Oh, I'm so tired. My hair feels heavy, and my chest is very tight." From the perspective of the first-person narrative, the entire text lacks a complete plot, or rather, the plot is downplayed, which gives her novels a poetic, prosaic quality. This narrative style, akin to prose poetry, allows the reader to immerse themselves in the story, following the perspective to experience the beauty and innocence of a child's life, enjoying the beautiful natural scenery and the simple, rustic local customs.

Secondly, in the third-person limited narrative from a child's perspective, often due to the child's innocence and the limitations of their thinking, the intervention of an adult perspective is needed to perceive the essence of things and reveal their patterns. Thus, the child's perspective must not only possess the unique experiences of a child but also be interwoven with the author's perspective, serving as an off-screen narrator, taking on the role of an observer and narrator of the external world. For example, in *"The Misty Moon Cowshed"* Bao Zui accidentally witnesses the intimate moment between his stepfather and mother, which leads to his stepfather accidentally injuring him and turning him into a simpleton. As a result, he is forced to live with the oxen in the ox shed every day. Even when his stepfather is on the brink of death, he refuses to live with him again. The story is told from Bao Zui's perspective, combined with third-person narration, and the entire text is imbued with a sense of alienation from the adult world. In this kind of narration, the writer can easily become estranged from the child they are narrating about. On one hand, the writer needs to rely on their personal experiences and feelings to guess at the child's emotions, while on the other hand, they must act as a narrator, responding to the reader's own experiences and feelings. This estrangement and sense of alienation is a unique flavor brought by the use of person narration.

Finally, apart from these two narrative modes, there also exists the third-person omniscient perspective. The narrator observes things like a god, but this omniscient viewpoint can damage the realism of the story. Therefore, Chi Zijian also tends to intersperse the narrative with the limited perspective of certain characters. In *"Bathing in Clear Water"* the story is told by an all-knowing narrator about the tradition of bathing in the northern rural town of Li Town during the New Year. Within the omniscient perspective, the viewpoint of Tianzao is interwoven, on one hand explaining why Tianzao insists on having his own basin of clear water for bathing despite some complaints and discomfort among family members. This, to a certain extent, shortens the distance between the reader and the characters, making it easy for the reader to understand Tianzao's actions and thus like and sympathize with this cute and sensible child. On the other hand, the author sets the story within a very short period of time, and the depth of the limited perspective extends the distance of time and space infinitely. Through the child's perspective, a warm scene in the ordinary life is discovered. The child's perspective also contributes to Chi Zijian's unique narrative style. The interpenetration

of the adult and child perspectives, the combination of the omniscient and limited perspectives, this polyphony in perspective gives the novel a poetic feature, adding more flavor to the content.

The Poetic Aura of Female Creators

Unlike male writers such as Mo Yan and Yu Hua, there exists a natural emotional bond between women and children, which unconsciously leads female writers to write about children. Male writers often use the perspective of children to depict the survival dilemmas of children and deeply inscribe the psychological traumas they endure. They engage in profound contemplation of historical situations and social humanity, using violence, loneliness, and hunger to portray an alternative form of traumatic growth. The world of children they depict is one that is deformed, cold, and absurd, and this stark writing reveals the ugliness and darkness of human nature.

However, due to the inherently gentle and delicate sensibility of female writers, their portrayal of the child's perspective inevitably carries a search for personal growth experiences and the essence of being. This is reflected in their writing with poetic characteristics. Chi Zijian, as a member of the group of female writers, is no exception. Early Chi Zijian's novels do not attract readers with dramatic twists and turns, nor are they known for depicting characters with distinct and individual personalities. Instead, they build a uniquely poetic style through the delicate expression of emotions and the capture of everyday life imagery.

Moreover, the perspective of children is an excellent angle from which to present a poetic style. A century ago, Tyler proposed the famous animism theory in *"Primitive Culture"* - that all natural things think and act like humans. Children's thinking, as a form of linear thinking, is characterized by its primitive and simple nature. In the eyes of children, animals can speak, the boundary between humans and objects is blurred, and the entire world is fresh and wonderful. They can naturally communicate with all natural things in spirit. Thus, in Chi Zijian's childhood landscape, there are vast snowfalls, splendid evening skies, dilapidated old kilns, potato flowers emitting a faint fragrance, and mushrooms as numerous as stars. In *"The Sleeping Daguqigu"* the setting sun is described as a child who has played himself out, while in *"Flower Petal Rice"* the wind is said to be of varying thickness and strength, capable of blowing cracks into clouds and making them cry; animals are also loyal and spiritual, such as the salmon in *"The Sleeping Big Guqigu"*, the yellow dog "Fool" in *"The Fairy Tales of the Arctic Village"*, the dog Bingliu in *"The Sunset over the Bowl Kiln"* and the juane in *"The Misty Moon Cowshed"*. They accompany children as they grow up; even the titles of the stories are filled with endless reveries of natural scenery, such as *"Kiss Potato"* *"The Sunset over the Bowl Kiln"* *"Primitive Scenery"* *"The Fairy Tales of the Arctic Village"* *"Snow Curtains"* and *"The Noonday Song of the Green Grass"*.

Innocent and pure-hearted children possess delicate souls that uncover the poetry in life. When reflected in novels, this imbues the narrative with poetic language and stirs romantic sentiments, resulting in the poetic characteristics of the text. "My heart is heavy. I lie barebacked in the corner, pressed against the wall. I think of the moon. I think of the stars. I think of the great river. I think of the ants, butterflies, dragonflies, and bees in the vegetable garden. I think of the morning glories, broad beans, and the necklace of my dreams. I think of the faint crescent moon. I truly wish to become one of them." With this perspective, the spirituality of nature is fully explored, thus giving rise to the ethereal world in Zijian Chi's writings, with fish that can cry, horses that understand human emotions, and potato flowers with a subtle fragrance. Under the strange and beautiful

moonlight, a child's heart is joyfully leaping, and the innocence and purity of a child vividly come to life on paper.

The Warmth of Individual Characteristics

Although both are female writers, both are regional literature, and both view life through the lens of a child's perspective, the works of Xiao Hong and Chi Zijian are touching and lead one into the pure and warm world of children. However, there are differences between the two.

"*The Biography of Hulan River*" is a childhood memoir written by Xiao Hong after experiencing the vicissitudes of life. The text focuses on her childhood life and the customs and scenery of her hometown, but what is more noteworthy is the author's deep pain and infinite loneliness while writing. Xiao Hong acts as a narrative observer in the work, providing a distant perspective. While readers experience endless fun in the colorful world of childhood during their reading, they also sense a touch of desolation in the subtext. She wrote in "*The Biography of Hulan River*": "The household items are all in pairs, even the bricks sunbathing have the sun to accompany them." But beyond the words, it was only I who was alone. The seemingly innocent words were scrutinized from an adult perspective, where joy intertwined with loneliness. As childhood faded away, all childhood memories were sealed in distant folk paintings. This memory coexisted and influenced Xiao Hong, but it could not be changed.

In the works of Chi Zijian, rural memories are no longer a spiritual refuge of a sorrowful era, but rather the destination of civilization. Modern civilization is developing at a rapid pace, and the essence of primitive life has almost been worn away. When people lose themselves in modern life, unable to find their true value and place, they look back to their childhoods.

Chi Zijian attempts to call for the return of civilization through writing from a child's perspective. On one hand, the adult perspective might overlook the beauty of ordinary life due to habit, but the choice of a child's perspective may be a reclamation of the goodness and warmth of human nature. In "*Bathing in the Clear Water*", Tianzao, starting at the age of eight, has to heat water for his family to bathe every year, but he has never had a real basin of clear water for himself. So in this year, having his own basin of clear water becomes his sole wish. Through the narrative of the story, Tianzao's busy figure moves us, and we see a diligent and lovable boy, as well as a warm and happy family.

On the other hand, life is not just about kindness and poetry; there is also ugliness and danger. Using a seemingly naive and innocent perspective, the true nature of things is more thoroughly revealed, with a cold irony dissecting human nature. In "*The Little Millstone in the Madhouse*" the little millstone does not discriminate against the patients in the mental hospital but gets along with them harmoniously. The novel uses the child's perspective of "the little millstone" to observe this small society within the mental hospital, documenting the words and deeds of these "madmen." In the story, the little millstone looks at the long train line paper that Zhang Laodao gives him and thinks it looks like "a chick breaking out of its shell, swaying its cute little head in the evening breeze." It is particularly fresh and vivid. These "madmen" in the eyes of normal people are seen as real friends by the little millstone, as dear companions to be with whenever there is time. After the little millstone leaves the mental hospital, he discovers that the outside world is not as he knew it.

And under this pure child's perspective, normal people become abnormal, while these mental patients also yearn for a space for equal dialogue, seeking understanding and comfort for their souls. Additionally, the madmen and fools in Chi Zijian's writings are moving, such as Baozhui in *"The Misty Moon Cowshed"* and Lingtiao in *"The Plague of the Luo Suo River"*. Their actions may be slow or foolish, but they actually reflect a series of social issues, a childlike heart, a kind of simple innocence shining on them, while the pure joy of childhood contrasts with the sadness of human nature.

Chi Zijian adds a touch of warmth and the light of humanity to rural life. In *"Bathing in the Clear Water"* the simple and warm family bathing ritual becomes particularly heartwarming when viewed through the eyes of a child. *"The Fairy Tales of the Arctic Village"* uses a child's perspective to break free from the constraints of adult expression, making the complexities of the human world seem simple when intertwined with the child's world. *"The Little Millstone in the Insane Asylum"* inverts the normal world and the world inside a mental hospital, leaving one to ponder who the real outsiders are. Through the eyes of a child, heavy social issues are made tangible and allegorical. This childlike perspective acts like a thin veil, and in the process of seeing flowers through the mist or the moon through the water, everything takes on a poetic quality, imbued with a warm gaze. For adults, it is the child who retains innocence and a childlike heart who is the true savior. If Xiao Hong's world of children is a heartwarming backyard garden, a bright but fleeting highlight, then Chi Zijian's world is a soft and enduring pale color. She does not indulge in great joys or sorrows, nor does she view the world with cold indifference; instead, she looks at the entire world with an all-embracing and benevolent gaze.

"Writing with warmth" is like a double-edged sword; on one side, it is the writing style that Chi Zijian is most adept at, her gentlest weapon. On the other, it is also seen by critics as her greatest flaw. Because she consistently adheres to warmth, her writing touches only lightly on the deeper aspects of human nature and cannot starkly reveal the profound dangers within. In an era when writers of various schools were coldly narrating scars, Chi Zijian stood apart, turning inward to find poetry and warmth in the beautiful childhood. She steadfastly held onto her narrative beliefs. Under the child's perspective, the beautiful scenery and kindhearted human emotions, the search for one's truest self, and the happy experiences of childhood that will never return—could these be the ideal utopia that the writer has found, the ultimate way to combat the world's coldness and noise?

Conclusion

Yang Yi mentioned in *"Chinese Narratology"*: "The author creates a narrator and a 'origin point' of perspective in a work, thus forming a narrative fan, and in the rotation of perspectives, a 'circle' of the narrative world is created." The child's perspective in Chi Zijian's works has contributed to her unique narrative style.

Since she emerged onto the literary scene in the 1980s, nearly half of her works have adopted the child's perspective. It can be said that Chi Zijian's warm and poetic writing style and the writing of the child's perspective have grown together. The child's perspective has contributed to Chi Zijian's creation, and under her writing, it has acquired a unique charm. She has created various child characters with different personalities in her works. They present the raw state of life with a simple

and innocent perspective, taking the reader into a fresh, simple, and pure aesthetic space and time, feeling the perfect integration of humans and nature, and an aesthetic critique of modern society.

Acknowledgment

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Use Overseas Social Media to Enhance International Communication : Jiangxi Case Study

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Abstract

The enhancement of international communication capacity and the improvement of the global communication quality of Jiangxi enterprises are pivotal to implementing Xi Jinping's diplomatic vision and his directives on strengthening international communication capabilities in the new era. This paper employs a case study approach to underscore the critical importance of international communication for Chinese enterprises, focusing on the strategies and practices adopted by Jiangxi enterprises in utilizing overseas social media platforms for global outreach. The findings provide valuable insights and strategic guidance for advancing the international communication capabilities of Chinese enterprises in the future.



Full Text Article



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Keywords: Overseas Social Media, International Communication, Chinese Brands, Jiangxi Enterprises, One Belt and One Road

Introduction

Effectively telling China's story and amplifying the voices of Chinese enterprises are essential tasks for building international discourse power in the new era. Since the 18th National Congress of the Communist Party of China (CPC), the CPC Central Committee, with Xi Jinping at its core, has prioritized external communication efforts (Guo et al., 2023). During the 17th collective study session of the 20th CPC Central Committee Political Bureau, Xi (2024) emphasized the necessity of "proactively advocating China's propositions, promoting Chinese culture, and showcasing China's image". At the fourth symposium on the One Belt and One Road (OBOR), he underscored the importance of establishing high-level communication mechanisms to ensure the sustainable and high-quality development of OBOR.

The Third Plenary Session of the 20th CPC Central Committee adopted the Decision of the CPC Central Committee on Further Comprehensively Deepening Reform and Advancing Chinese Modernization, which emphasized the need to "accelerate the construction of a Chinese discourse and narrative system, and comprehensively enhance the effectiveness of international communication" (CPC Central Committee, 2024). Xi (2022) insights into international

communication, coupled with the Party's strategic decisions, provide essential guidance and foundational principles for Chinese enterprises seeking to enhance their communication capabilities in the global market.

In the context of deepening globalization and rapid advancements in internet technology, overseas social media platforms have become indispensable tools for fostering international communication and cooperation. Twitter (now rebranded as X), a globally renowned social media platform, is distinguished by its user-friendly features for sharing text, images, videos, and links, as well as its emphasis on real-time information and public discourse. It has established itself as a crucial medium for international communication.

Numerous prominent global political and business figures, including Twitter CEO Elon Musk, U.S. President Joe Biden, former U.S. President Donald Trump, and French President Emmanuel Macron, actively utilize Twitter to make significant announcements, share their views, and engage with the public. For global audiences, Twitter serves as a convenient channel to access information about Chinese culture, cuisine, and other topics, fostering deeper cross-cultural understanding, enhancing China's soft power, and creating new opportunities for Chinese enterprises to expand their presence in international markets.

The Concept and Significance of International Communication

2.1. The Fundamental Concept of International Communication

International communication is broadly defined as the exchange and dissemination of information across national borders. At its core, it entails the transmission of information, ideas, values, and cultural elements through various media and channels between different countries, cultures, or regions (Guo, 2024). Scholars widely acknowledge that international communication serves as a vital bridge in fostering international relations, facilitating economic globalization, and promoting cultural integration. Its scope primarily includes three key dimensions: communication at the national level, communication at the corporate level, and communication at the cultural level.

At the national level, international communication is recognized as an essential tool for enhancing a nation's soft power and shaping its global image. By leveraging traditional media (such as television and radio) and emerging digital platforms (such as social media), governments can articulate policy positions and project national perspectives to the international community. For example, China utilizes the One Belt and One Road (OBOR) initiative to highlight its commitment to openness, cooperation, and mutual benefit, thereby fostering stronger interactions and partnerships with countries along the OBOR routes.

At the corporate level, international communication centers on brand promotion and market expansion. With the proliferation of multinational corporations and the intensification of global competition, businesses increasingly depend on international communication networks to bolster their brand visibility in global markets. By leveraging these communication channels, enterprises can effectively articulate their core values and foster meaningful connections with consumers worldwide.

At the cultural level, international communication functions as a bridge for cross-cultural exchanges. Iconic elements of Chinese culture, such as the Spring Festival, martial arts, and

Chinese cuisine, are continually introduced to global audiences through films, social media, and other communication platforms. These cultural exports not only facilitate mutual understanding between China and other countries but also play a pivotal role in enhancing China's cultural soft power by cultivating a broader appreciation and recognition of Chinese culture on the global stage.

Furthermore, the advancement of internet technology has positioned emerging digital media as a pivotal driving force in international communication. Compared to traditional media, digital platforms provide enhanced interactivity and immediacy, enabling the rapid dissemination of information on a global scale. With the increasing prominence of global social media platforms, international communication has not only diversified in form but also expanded significantly in its reach and impact.

2.2. The Significance of Strengthening International Communication

Strengthening international communication is essential for enhancing China's global communication capacity and addressing the challenges posed by the dominance of Western discourse in shaping international narratives.

First, it is crucial for bolstering China's global discourse power. Under the hegemony of Western media, global narratives about China are frequently framed through biased perspectives. Wang (2022) said that approximately 90% of global news content and over 75% of video programs are produced by Western media. Consequently, a significant portion of the international audience—around 68%—relies on Western media for information about China, perpetuating misconceptions and stereotypes that contradict China's peaceful and cooperative image. This imbalance underscores the disparity between China's growing national strength and its international communication capabilities. Enhancing international communication is therefore imperative for fostering a favorable external environment for China's development and for presenting a truthful, multidimensional, and comprehensive image of the nation to global audiences.

Second, strengthening international communication is an indispensable requirement for Chinese enterprises in the social media era. The widespread adoption of the internet and mobile communication technologies has led to profound transformations in global communication methods. Social media platforms, distinguished by their immediacy, interactivity, and expansive user base, have emerged as indispensable channels for global information dissemination. Among these platforms, Twitter has achieved remarkable success and widespread adoption in international markets. Its compatibility with modern users' fast-paced lifestyles and preference for fragmented information consumption has established it as a favored tool for brand promotion and information sharing among multinational corporations and individuals alike.

As of the end of 2023, Twitter reported 368 million active users, including 238 million monetizable daily active users. A significant proportion of its user base falls within the 25–34 age demographic, accounting for 38%, with male users comprising 57% and female users 43%. Additionally, users from the United States, Japan, the United Kingdom, Brazil, and Canada collectively represent over 50% of the platform's global audience. Among these, U.S. users contribute 25.47% of total traffic, solidifying the United States as Twitter's largest market (Paschigeyi, 2024). These statistics highlight that Twitter's audience is not only globally diverse but

also possesses considerable purchasing power, presenting new opportunities for Chinese enterprises to promote their brands in international markets.

In an era of intensifying global competition driven by information technology, leveraging social media platforms to enhance international communication capabilities allows Chinese enterprises to establish robust brand images and cultivate meaningful connections with global audiences. Social media's rapid dissemination capabilities enable enterprises to promptly respond to market dynamics, ensuring they remain agile in a fast-paced environment. Simultaneously, by gaining a deeper understanding of target market users' needs and preferences, Chinese enterprises can craft more precise and impactful communication strategies, thereby amplifying their global brand influence.

Moreover, strengthening international communication is a vital strategy for Chinese enterprises to build competitive brand images in the global marketplace. In the evolving communication landscape, fully utilizing the potential of social media platforms will be pivotal to enhancing their international communication capabilities and achieving sustainable global growth.

The Practice of Jiangxi Enterprises in Strengthening International Communication through Social Media

"Telling Jiangxi's compelling stories, spreading Jiangxi's most beautiful voice, and showcasing Jiangxi's positive image" has become a guiding principle for Jiangxi Province in the new era to enhance its international communication efforts and improve their effectiveness (Guo et al., 2023). As a prominent representative of Jiangxi enterprises in the international market, China Jiangxi International Economic and Technical Cooperation Co., Ltd. (hereinafter referred to as "China Jiangxi International Company, CJIC") successfully implemented the China-aid borehole drilling project in Zimbabwe. This project directly benefited approximately 400,000 people, accounting for 3% of Zimbabwe's population, and was recognized as one of the "Top 10 Comprehensive Classic Cases" in China-Africa Cooperation under the "Hundred Enterprises and Thousand Villages" initiative.

The implementation of this project not only exemplifies CJIC's successful practices in the global market but also highlights the capability and achievements of Chinese enterprises in effectively telling China's stories and amplifying its voice through international communication.

3.1. Establishing Social Media Communication Account

Between 2012 and 2021, CJIC implemented the construction of 1,000 boreholes across six provinces in Zimbabwe in four phases. This project addressed the critical drinking water needs of approximately 400,000 people, accounting for 3% of Zimbabwe's population. It significantly improved local sanitation conditions and fostered strong relationships between the company and local communities throughout its implementation.

To amplify the international impact of China's aid efforts, CJIC established a dedicated Twitter (now X) account for the project before its launch, successfully attracting over 1,200 local followers. Leveraging this social media platform, CJIC regularly shared project updates with Zimbabwean and

global audiences. This strategy not only enhanced the project's transparency and interactivity but also contributed to shaping a positive international image for the "China-aid in Africa" and One Belt and One Road initiative.

3.2. Enhancing the Precision of International Communication through Local Employees

In cross-cultural communication, the effectiveness of information transmission is often impeded by differences in language, cultural background, and modes of expression. These challenges can create a disconnect between the communicator's intent and the audience's understanding. To address this issue, CJIC has adopted an "internationalized mindset" and actively explored diverse communication strategies by leveraging local resources. The company encourages and supports exceptional local employees to take on pivotal roles in its international communication efforts.

In the China-aid borehole drilling project in Zimbabwe, the team emphasized the role of local employees as cultural bridges in their promotional activities. By drawing on their deep understanding of local language and cultural nuances, the team tailored project communication to meet the preferences and expectations of the local audience. This "Chinese-led, local employee-supported" communication model integrated local language and cultural elements, significantly enhancing the localization of content and mitigating misunderstandings arising from linguistic or cultural differences.

The active involvement of local employees further facilitated meaningful cultural exchanges between China and Zimbabwe, effectively addressing cross-cultural communication challenges often characterized as "speaking past each other." This approach not only bolstered the company's recognition and influence within the local community but also strengthened its capacity to forge enduring connections with the populations it serves.

3.3. Efficient Delivery Enhances CJIC's Impact

During the fourth phase of constructing 500 water wells, CJIC overcame significant challenges posed by the COVID-19 pandemic. Despite these obstacles, the company successfully completed the construction tasks within the designated two-year timeframe. On August 13, 2022, the 500th water well was officially completed at Sinodo Primary School in Gwanda, Zimbabwe. Local teachers and students expressed their heartfelt gratitude to China through vibrant singing and dancing, symbolizing the project's profound impact on their community.

This memorable moment was captured on video and shared on Twitter, where it quickly attracted widespread attention. The Chinese Embassy in Zimbabwe reposted the video, garnering over 200 likes and nearly 100 retweets within a short period. This not only amplified the visibility of the project but also enhanced the impact of China's aid efforts, effectively showcasing the success of the "One Belt and One Road" initiative and its commitment to fostering international development.

3.4. Fulfilling Corporate Social Responsibilities and Building CJIC's Image

Amid the COVID-19 pandemic in Zimbabwe, Jiangxi International Company (CJIC) actively fulfilled its social responsibilities by donating 40,000 disposable medical masks and a batch of disinfectant supplies to the local government. These donations helped mitigate the critical shortage of hygiene and protective materials during a challenging period. The President of Zimbabwe personally attended the donation ceremony and highly praised the company's contributions to public welfare. He specifically acknowledged that the "China-aid water wells" project not only addressed the drinking water shortages in remote communities but also reduced the risk of disease transmission during the pandemic (Yan, 2021).

These philanthropic efforts were met with widespread positive responses across various sectors of Zimbabwean society, amplified through coverage on Twitter and local media. CJIC's actions not only underscored the company's commitment to social responsibility but also significantly bolstered its reputation and influence within the local community.

3.5. Practicing Shared Development and Strengthening People-to-People Ties

During the implementation of the project, CJIC actively embodied the concept of "shared development" by creating employment opportunities and offering skills training to foster local economic growth. At the initial stages of the project, the company adhered to the principle of "teaching by example and mentoring," employing a substantial number of local workers while Chinese technical experts conducted comprehensive training programs. Over the course of the project, CJIC successfully trained 10 drilling machine operators, 6 mechanics, and numerous masons and carpenters.

Lauren, a Zimbabwean employee who served as a project coordinator, expressed that her involvement in the project not only equipped her with valuable professional skills but also allowed her to experience the warmth, support, and mentorship of her Chinese colleagues. Similarly, Abedinico Ncube, Governor of Matabeleland South Province, commended the "China Water Well" project for delivering tangible benefits to the Zimbabwean people. He remarked, "China and Zimbabwe are good friends and good brothers, and the water well project exemplifies the practical cooperation between the two countries" (Gao, 2021).

3.6. Strengthening Media Collaboration and Expanding Communication Impact

CJIC bolstered its communication efforts by establishing a strategic collaboration with Zimbabwe's largest newspaper, The Daily News. The company invited journalists to visit project sites and beneficiary communities, resulting in a series of in-depth reports that comprehensively highlighted the project's positive outcomes. These reports not only increased the project's visibility within Zimbabwe but also enhanced the international profile of China's aid efforts in Africa.

Moreover, central Chinese media outlets, including Xinhua News Agency, China Central Television (CCTV), and People's Daily Online, have extensively covered the project. Since August 2021, these reports have further amplified CJIC's international communication impact, solidifying its reputation as a significant contributor to fostering China-Africa cooperation and mutual development.

3.7. Leveraging Official Accounts to Enhance Communication Efficiency

CJIC strategically leveraged the influence of official Twitter accounts, including those of the Ministry of Foreign Affairs spokesperson and the African Affairs Department, to amplify the visibility of its project-related tweets. These posts were further shared by official accounts such as the Chinese Permanent Representative to the United Nations, the Chinese Embassy in Zimbabwe, and ambassadors to Malawi and Pakistan. This engagement garnered numerous likes and retweets, significantly extending the project's reach and impact.

Throughout the project's implementation, CJIC consistently published updates on progress, recruitment opportunities, and procurement announcements. This proactive use of social media not only ensured transparency but also engaged a wider range of stakeholders. By utilizing efficient communication strategies, the company enhanced its visibility and reputation within the international community, further cementing its role as a key player in global development efforts.

Conclusion

Amid the deepening globalization and transformative changes in the international communication landscape, strengthening international communication has become a critical strategy for Chinese enterprises to enhance their national image and amplify their soft power. Through the implementation of the water well project in Zimbabwe, CJIC not only addressed pressing local livelihood issues but also effectively conveyed China's story and Jiangxi's voice via the social media platform Twitter. By utilizing a dedicated Twitter account and collaborating with authoritative accounts, the company achieved real-time dissemination of project updates, expanded its outreach, and established a transparent and trustworthy image of China's aid to Africa. These efforts have significantly contributed to the positive branding of Chinese enterprises in international markets.

The international communication practices demonstrated by CJIC's water well project in Zimbabwe illustrate that, in today's information-driven and digitalized communication environment, effectively leveraging emerging social media platforms alongside traditional media channels can significantly enhance the communication capabilities of Chinese enterprises. This integrated approach fosters a multi-dimensional and comprehensive international communication framework. Looking ahead, Chinese enterprises should continue to adapt to evolving trends in international communication, deepen cultural exchanges and engagement with target markets, assume greater social responsibilities, and actively promote sustainable development in international markets. Such efforts will play a pivotal role in advancing China's global communication capacity and strengthening its presence on the international stage.

Conflict of Interest

The authors declare no conflict of interest.

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The Nature of Technology - Analysed from The Perspective of The Anthropological Subject

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Abstract

The essence of technology is at the same time the essence of man. Ernst Karp and Karl Marx are great philosophers in the same period, who successively formed a distinctive philosophy of technology and view of technology in their understanding of the concept of technology in terms of technological ontology, technological evolution and society, culture and state. On the basis of analyzing and comparing the differences between Karp's and Marx's views on technology in terms of technological ontology and technological epistemology, this paper follows the dialectical way of thinking and finds that Karp's view of technology is narrow in terms of the existence of isolation and mechanicity. Marx's view of technology, on the other hand, explains the relationship between society, technology, and productive forces in a discourse led by holistic thinking, and ultimately puts human beings in the link of purpose and power of technological development for dynamic examination.



Full Text Article



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Keywords: philosophy of technology; marxism; productive forces and relations of production; nature of man; Ernst Karp

Introduction

Karl Marx and Ernst Karp were outstanding German thinkers and philosophers during the same period, and their ideas were both very popular in their own fields of study and studied by multitudes. Marx's views on science and technology have been elaborated in detail in "Research and Revolution - China's Science and Technology Policies and Social Change", written by American scholar Richard P. Sutmire; and "Ten Years of Reform: China's Science and Technology Policies", published by the International Development Research Center (IDRC) of Canada in cooperation with China's State Science and Technology Commission (SSTC).

The study of Ernst Karp has been discussed since the middle of the twentieth century: one view is that the framework Karp applies to the philosophy of technology is to a certain extent superior to other philosophical frameworks for the study of technology. But Karp, while rejecting Hegel's

idealism abandoned the dialectic and simply projected philosophical ideas that viewed technology on a non-technological level. (Carl Mitcham, 1972).

One perspective suggests that in Karp's idea of organ projection, the link between organs and technology is straightforward, i.e. he "establishes a special connection between organs and technology." (Jean-Yves Goffi, 2012) as well as the equally groundbreaking perspective that Karp had studied certain similarities between external tools and human organs and developed this idea into a philosophical reflection. (VAN PEURSEN, 1970) Ernst Karp's projection of the human self as a template in his philosophical theory of technology in relation to real-life technology is in fact an externalized manifestation of an advancement of human consciousness in its understanding of itself, a perspective that does contribute to both anthropology and philosophy of culture. (Kirkwood Jeffrey West 2018)

Although their ideas have been exhaustively studied, there is still no comparison between their philosophies of science and technology in the academic world.

Karl Heinrich Marx and Ernst Karp were both pioneers of the philosophy of technology in 19th century Germany, and their successive philosophical reflections on "technology" resulted in different views and philosophies of technology, which have had a profound impact on later generations. Both of them were influenced by Hegel in their youth, but subsequently put forward different understandings and interpretations of technology.

In this paper, we focus on their views on the philosophy of science and technology, adopt a qualitative research method to compare their representative views on the philosophy of science and technology, analyze their differences, and find out the reasons behind them.

Karp's and Marx's basic views on the philosophy of technology

Karp's simple view of technology: the hand is the prototype for instruments of the same kind of purpose. Karp's plain view: all tools or instruments with the same kind of purpose are modeled on the human hand as an instrument for orienting, touching, picking up, and moving. "For the hand is the instrument that is born and becomes the model for the machine." [1] For some of the activities that do not appear to be extensions of the human organ, such as in the instruments and devices of the arts and sciences, Karp, for his part, sees them as recreations that are extensions of the hand, adding that the mental artifacts burrowed out of the hands, the teeth, and so on. Fingers become hooks, hands become bowls. Knives, spears, shovels, rakes, plows and spades saw arms, hands and fingers in a variety of positions.[2]

On the other hand, people create tools in accordance with their bodies and organs, both consciously and unconsciously. This idea comes from Carruth and Hartmann's *Philosophy of the Unconscious*. Karp argues that the human body is seen in the world as an indicator of the real, and that people can learn about themselves through the techniques and instruments that are projected onto them, but these are more unconscious than conscious. Unsurprisingly, Karp draws on Darwin's theory of biological evolution: 'On the railroads and airline routes, is based on the circulation of blood within the organism'[3]

At the same level, Marx viewed technology as the essence of the productive forces. Technology, as part of the productive forces of society, progress in technology causes changes in social relations,

which are manifested in the productivity revolution of the industrial revolution. Social revolution is essentially the contradictory movement of the productive forces and relations of production embodied in society. Marx's view of technology as the productive forces of society is the development and great changes in the system of machines and the great changes in the mode of production and productive forces based on it: "The bourgeoisie has created in its less than 100 years of class domination more and greater productive forces than all the productive forces created in all the past generations"[4]

On the other hand, social production is also a constraint on technological development. Because the "first prerequisite for all activities" is material production, which determines the prerequisites for the development of other aspects of production, it is also reflected in the technological dimension, that is, the necessary conditions for technological production and the driving force for progress. Technological production and progress is first of all stimulated by economic development and social production, demand for the emergence of machine technology to provide the most essential power. Marx, after examining the development of technology, believed that the biggest factor promoting the emergence of machines and machine labor was the expanding demand, which could no longer be met by manual labor.

This leads to Marx's most fundamental point about technology, which is that the basic driving force of technological development is economic activity expressed in the need for production. The ever-expanding productive forces provide the needs and economic possibilities for the birth of technology, the material means and the prospects for its development.

At the same time, Marx also pointed out that the greatest difference between man and animals comes from labor. Labor begins with technical activity, i.e., the creation of tools. Tools are not only extensions of man's natural limbs, but also the embodiment of man's purpose and will, the organs of the human brain created by man, materialized knowledge.

In the broader realm, that of society and the state, Karp argues that the facsimile of machinery and society remains the human organ. In the course of their development, tools lose their congruence with the human organ in appearance. But in essence, the technical tools and all the artifacts that result from the technical outcome are projected according to the size and number of the human body.[5] Therefore, Karp continues to believe that tools are projections of organs, externalized forms of the human body, thus making them consistent with the human organ from a comparative point of view. "Machines that show an essential relation to the human body are projected to a higher degree, external shapes are less similar, and projections with spirituality are clearer." [6]

Beyond this, Karp broadened his vision, expanding the argument from industry and machinery to the new science of mechanical engineering. The prototypes of design activity were derived from the human skeletal structure, while the steam engine's conversion of fuel into heat was inspired by the human affective system, and even the electronic communication system, to which Karp referred to the human nervous system. Karp argues that all tools are inspired by human form and function, and that the human organ is the measure of the tool. Thus, at the level of the tool, the human being becomes "the measure of all things". "The intrinsic relationship between tools and organs is more of an unconscious discovery - that is, man is constantly creating himself through tools. The

utility of the tool comes from the control of the organ, so that the form of the tool can only originate in that organ" [7]

Karp argues that in addition to exploring the relationship between technology and human beings at the level of tangible technology, he also sees linguistic culture as a product created by technological culture. At the level of society, the state is not a material institution, but a system, but it is also mapped and reproduced from human organizational systems. He argues: if this is reflected in language then the most obvious place to look would be the state system[8]

Marx's study of technology in society is more macroscopic: it shows that from the perspective of social change, it points out that technology is the basic driving force of social change.

Social ownership is a technological advance embodied in the social division of labor, and technology is equally fundamental to social consciousness. Spiritual activity is likewise intertwined with people's material activity. In the process of material production, people's spirituality guides technology, sets up plans for its utilization, and guides the development and improvement of evaluation systems.

In looking at the issue of capitalism, Marx argued that machines are an integral part of capital, and that the social relations entered into by producers as well as their interactions are different because of the differences in the means of production. As technology advances, the development of the means and relations of production inevitably leads to capitalism. In terms of how technology contributes to social change, Marx writes, "No social form can ever perish until the full productive forces it contains have been brought into play." [9] And the specific forms of change are varied from "material changes taking place in the economic conditions of production" to "material changes in the economic conditions of production." change" and "the legal, political, and other ideologies that people use to overcome conflict" [10]

Marx emphasized at the level of social management that technology is the basis and prerequisite for social management.

Marx made an in-depth analysis of the problem of the relationship between the capitalist and the laboring worker in the capitalist mode of production, in which, in his view, the worker labors under the supervision of the capitalist and the output belongs to the capitalist. This capitalist management is dualistic, and this duality arises from the duality of production, where the technology of the workshop craftsmen is historically present, and on the other hand the one-sided activity of the workers acquires a narrow form of activity (independent production). That is to say, on the one hand, the craft industry has the division of labour as the basis of its socialized production, while on the other hand, the narrow localized production is growing.

"The principle of division of labor, peculiar to the workshop crafts, isolates the different stages of production, which are independent of each other as the same number of partial labors of an artisanal nature" [11] Here Marx saw a refinement of the social division of labor under the development of technology, dividing production into a number of mutually independent and nested segments, separating human manual technology into separate and atomized segments, but at the same time laying the technological foundations for production in large factories. Marx saw it as the externalization of the factors of historical progress and development in the formation of the social economy and the evolution of the means of exploitation. [12]

Large-scale industrial production brought about an increase in the efficiency of production, but it also caused extensive changes in the relations of production, the original ties of the workshop craftsmen were severed, but "the capitalist mode of production at the same time created the material prerequisites for a new and higher synthesis, that is to say, for the union of agriculture and industry on the basis of their antagonistic development." [13]

Interestingly Karp's *Outline of a Philosophy of Technology* opens with, "If the history of man is studied, he can be found to be the history of the improvement of tools. If the method of making tool-use-history is to be made more advantageous, it would be more profitable to compare it with Marx's class-war-history." Both theories Karp is talking about here are meta-theories, scientific systems that incorporate other disciplines, such as anthropology, political philosophy, economics & sociology. Marx's class-war-history theory, on the other hand, is essentially derived from the "theory of alienation" and the "laws of scientific history". Compared with Karp's tool-use-history, Marx's theory seems to be less direct, or rather, somewhat detached from reality. Karp's viewpoints are more derived from his personal experience of life and the needs of the challenges he faced, adopting more concepts of human nature and connective technologies, cultural processes, and cultivated environments.

From this point of view, in order to explore Karp's "organ projection theory", we should start from the purposefulness of Karp's question, which is to link the natural existence of human beings with the creation of artifacts, and to ask what makes the invention and technology come closer and closer to the function of the human mind and body. If we examine Karp's "organ projection" from this perspective, we can see the shadow of his anthropocentrism, and we can also arrive at his important point: the self-liberation and self-consciousness of human beings and human nature.

Even at the more macro level, where it seems impossible to find a direct counterpart in the human organism, such as the state apparatus, Karp still argues that the state is a machine until its despotism destroys the human being, and that attacks on despotism from the lower levels can enrage it, so that the state can be compared to the fragile nervous system. The more mechanically a state is controlled, the more despotic he is; the more organic a state is, the freer he is. Thus, "The machine is despotic, the organism is free." [14] and as articulated in the *Outline of the Philosophy of Technology*:

The State should function like an organism, although it cannot be machine-like in general. There are machines within it, and these machines are treated as different parts within the whole organism. [15]

It is easy to see that technology has a limited role to play in the emancipation of the human being, and in the case of machinery, maximizing its role is essentially a matter of increasing the precision and reducing the redundancy of parts in order to reach the "limit". Therefore, for the smooth functioning of a social organization or a state apparatus, it is necessary to reflect the structure of the human body (since the structure of the human body is the "optimal solution" to the limit).

In Marx's view, historically, since the transformation of man from a direct participant in the process of production to a simple motive force, all the work accomplished has been determined by the machine. As technology evolved from the level of serving man to that of controlling him, its development was not simply in a favorable direction. On the one hand, technological development is a process of self-improvement towards better control of nature and greater exploitation of natural

resources, but on the other hand, it is also alienating the essential nature of the human being and diminishing his holistic, dynamic aspect.

Just as in the factory, the invention of new machines results in more efficient organization of production, but likewise makes forms of labor redundant and thus reduces the number of workers. "Machines have had a negative effect on the mode of production based on the division of labor, and on the specialization of labor on that basis"[16] In addition, the role of technology in the transformation of human culture, according to Marx, is to be examined in terms of the mode of production of the means of labor, as well as in terms of the transformation of the relations of production of the machines and tools.

In the age of capitalism, the input of large industrial machines, the rapid depreciation of the individual physical strength and skills possessed by workers, the lengthening of absolute working hours, the great increase in productivity and labour intensity, as well as extensive social collaboration, all lie in the enormous change in the way society is managed and organized, which is formally a double-edged sword brought about by technological development.

For Marx, the development of technology cannot be separated from the ontological status of man.

It was Marx's lifelong pursuit to pay attention to the reality of man's existence, to care for his future development, to pursue his fundamental emancipation, to promote the progress of human civilization, to eliminate exploitation and oppression, and to return to man himself all that belongs to him. The complete emancipation of man requires a thorough understanding of the source of his oppression. At the same time, all the doctrines of Marxism are premised on human beings therefore technology in him is more as a weapon of social criticism, and most of his ideas are the result of the social criticism of technology. His philosophical thought on technology ultimately serves the supreme goal of overcoming the alienation of man and liberating him.

Analysis of Marx's view of technology and Karp's view of technology

On an epistemological level, in Karp, the technological product is a summation of the process of empirical production from the concrete to the abstract, and he recognizes, based on his own long history and experience with artifacts, that the tool or the machine is similarly related to the organs of the human being, as an extension or projection of one's own organs. This kind of man is empirical and austere, with metaphysical implications. From the experience of the similarity between various objects and the arms or organs, Kaplan inductively analyzes and arrives at the "theory of organ projection". This is a kind of inductive analogy that rises from empirical sensibility to abstract rationality. On the cultural level, Karp also believes that it is technology that transforms nature and society under the impetus of human beings, forming culture and society.

In Marx, the analysis of technology is more in the analysis of the products of technology. Marx tends to break down the machine into its different parts, namely the engine, the transmission machine and the tool machine, but up to this point, Marx does not go any further in his analysis. But this structured vision brings benefits to Marx's examination of society and alienated man. According to Marx, the products of technology are the instruments that produce surplus value. Thus, Marx's philosophy of technology ultimately serves his theory of social philosophy. In time, Marx's

philosophy of technology predates Karp's "projection of organs", but in the above sense, Marx did not place the philosophy of technology in a primary and important position.

Therefore, from the level of social impact, Karp likened tools and machines to human organs, took technology as an object of study, and made engineering, anthropology, and explanations to open up the basic direction for the philosophy of technology, so in this sense, Karp's philosophy of technology plays a pioneering and foundational role.

From the perspective of technological ontology, Karp only mechanized the simple viewpoint: to regard machinery as the projection of human organs in reality, to regard the generation and even the development of technology purely as the driving force brought about by human needs, and to regard human beings as the center of technology, which also led to the neglect of the important role of the natural world as well as the other species of the natural world. Naturally, Karp's view of technology has also become one that leads him to believe that technology is a tool and a necessity for the conquest of nature, to the neglect of the organic whole that is closely related to and unifies human society and the natural environment. The single-minded emphasis on the role of technology for human beings would also lead him to overlook the importance of diversity and harmony between the natural environment and human beings. Therefore, "organ projection" has the narrowness of over-centering on man himself and neglecting nature.

On the other hand, Karp's technological materialism is a mechanical materialism. Seeing society, technology, and tools as human organs, attaching thereby external objects to the cognitive subject, making technology subordinate to man, and ignoring technology itself and its natural laws of development, as well as isolating technology itself, failing to see its interconnectedness with the outside world, and naturally failing to see the role of external conditions in technological development.

In the capital theory and other political economy works, Marx has made certain judgments on technology, but scholars are divided on whether Marx has a systematic philosophy of technology, according to Marx's series of indirect assertions about technology, which can be called Marxist view of technology according to Wu Guolin's (2014) point of view. The Marxist view of technology, on the other hand, is based on system and connection, and Marx's technological essence is directly related to the human-like essence, so to grasp Marx's view of technology, we need to start from the perspective of human essence, and to understand human beings and their human-like essence first. Wu Guolin also points out that "Marx's or Marxism's view of the nature of technology directly relates technology to the nature of human beings, and thus this can also be seen as a substantive view of the nature of technology." [17] In Marx's view, the class essence of man is "free conscious activity", and the real essence of man is "the sum of social relations". Therefore, technology is essentially the product of people's free, conscious activity, and at the same time, conscious activity itself. With human beings, the free conscious activity of human beings is created, and technology itself is created unconsciously. The biggest difference between man and animals is labor, and from this point of view, technology is also the essential existence that distinguishes man from animals. At the level of the essence of technology, Marx's view of technology is already non-mechanical and non-independent.

Marx also viewed technology as both a product and a creator of human-society relations. On the one hand, the needs of society are the source and driving force of technological development, and

on the other hand, the iteration of technology renews the relationship between man and society. Technology is both a reflection of the level of social productivity and a response to the existence of the human species. The essence of technology arises together with the essence of man, and then develops together with his productive activities and class essence. At the level of technological development, Marx adopted a systemic and holistic view, a progression under the Kappian mechanistic and isolationist view. Marx's view of technology involves the analysis of many social phenomena in addition to the study of technology itself, and these analytical reflections are not only organic but also processual, so that the objects of study in Marx's view of technology are not abstract essences but concrete, living, dynamic things.

Through comparison, the following insights can be gained: first, Karp's philosophy of technology is based on human beings, reflecting the humanistic ideology advocated in the era. Technology is not some other object independent of man, but a projection of the subject in the real world. Projection, in turn, implies connection, the guidance and constraint of man on technology, but at the same time Karp is equally caught up in the isolationist viewpoint, rejecting the influence of other objective things on technology. Secondly, Karp's philosophy of technology is not dialectical but intuitive, mechanistic projection of man as a paradigm of technology shackles his deeper analysis of social development, while at the same time he recognizes the role of technology on culture and avoids the prison of mechanism. Thirdly, Karp's view of the nature of technology lacks a priori knowledge, believing that technology is spawned by human needs and imitates the human body in the process of production, while ignoring the process of spontaneous formation and development of technology in natural practice and social production.

An Exploration of the Reasons for the Existence of Narrowness in Karp's Philosophy of Technology

At that time, people's attention to philosophy was more on revering theoretical knowledge and devaluing practical technical labor. In addition, people engaged in specific technical operations or practical activities did not have sophisticated theoretical knowledge, leading to the segregation of scholars and craftsmen. The difference between the scholars' pursuit of discernment and the craftsmen's practical and experiential approach led the scholars to ignore the problems posed by technical practice, while the craftsmen ignored the search for theoretical knowledge. Scholars saw "man as a rational animal" and neglected the fact that man is a "laboring man" and a "practical man." Marx, in his *Syllabus on Feuerbach*, directly pointed out that philosophers are always trying to explain the world in different ways, but the real problem is how to transform the world[18]. Karp's theory comes from his practice of productive life, Karp utilizes an anthropological approach to analyze technology, using the experience gained in Texas to mechanically and empirically combine tools with human and human cultural influences.

Technology is inextricably linked to social production and productivity, and Karp, influenced by environmental determinism, finds it difficult to distinguish the relationship between the social roots of technology and its ability to solve practical problems. Secondly, technology is a kind of systematic knowledge, which requires analysis between ontology, epistemology and methodology, and technology also has a purposeful action, which is a problem-solving oriented mode of action,

and the combination of the two directly leads to the fact that the analysis of the philosophy of technology requires deductive reasoning and sociological factors, and ultimately needs to face the actual goals and specific actions, making it impossible to generalize its various aspects.

Karp lived in the 19th century, when the influence of physics on the world of thought was increasing day by day and mechanism was prevalent, causing many scholars to fall into the prison of mechanism, even in the study of anthropology. People tend to see the appearance of mechanical, social, and physical movements and combine them with mechanistic theories, but it is difficult to deeply analyze the essence behind them. On the other hand, Karp was limited by his time and did not correctly understand the organization of the human body, especially the fallacy of the mental system which led to his mistake of mapping the nervous system simply as a telegraph. So Karp's understanding always remained superficially intuitive and empirical.

In general, although Kapp as a philosopher many of his ideas are forward-looking, laying the foundation for the research of later scholars, and even having a certain inspirational effect. However, he was limited by his time and experience life, resulting in his philosophy of technology with a strong simplicity and empirical thought. Although Karp's philosophical view of technology embodies human creativity and humanistic features to a certain extent, it actually reflects the demands of the rising capitalist society at that time: he simplifies and isolates the relationship between technological development and social progress, instead of adopting the view of connection as Marx and Engels did, which puts technology, an instrumental object, into the productive forces and relations of production, and naturally, he cannot see the relationship between the development of technology and the alienation of man. connection between technological development and human alienation.

Conclusion

Through the comparison between the two it is not difficult to realize that the difference between Ernst Karp's and Marx's views on science and technology comes from the environment in which they work; Marx constructed a philosophical study of technology at different levels, from the economic base to the superstructure, through a three-dimensional and comprehensive understanding of society. Karp, on the other hand, was prompted to think about the philosophy of science and technology through the tools of observation because of the environment in which he worked. On the other hand, they both emphasized the importance of human beings in the philosophy of science and technology to varying degrees, but the depth of discussion was different. Marx, starting from technology, emphasized the role of technological alienation and technological development in the confinement and emancipation of human beings, whereas Karp's study of human beings in technology stops at the mere fact that technology facilitates the development of human beings, while ignoring the antithesis of technological development.

Based on analyzing the philosophical views of technology of the two, this paper hopes to provide some insights and help to later scholars and scientists of science and technology. While focusing on technological development, it is important not to forget the essential power of human beings as owners of technology and of technology, and not to use technological development to alienate human beings.

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Conflict of Interest

The authors declare no conflict of interest.

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Blank Space--On the Creation of Dream Dance Beauty in Deep House of Graduation Drama

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Abstract

The creation and expression of dance beauty in small theater space has always been limited by funds and theater technology, and often the main creative team does not consider visual impact through dance beauty. However, with the further pursuit of improving the spiritual level of public aesthetics, more and more people enter the theater to enjoy the verification brought by the drama world, which puts forward higher requirements for stage art with drama function. This paper discusses how to achieve the best of both worlds by presenting the stage effect with visual impact with very little funds in a small theater space with many restrictions through the creation of dance beauty in graduation drama *Shenzhai Jingmeng*.



Full Text Article



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Key words: Stage art design; Leave blank; Deep house dreams; Feudal ethics; Dramatic tension

The graduation play "Deep Dreams in the House" is adapted from Su Tong's novel "Concubines", on which Zhang Yimou also based his 1991 movie "Big Red Lanterns Hanging High", which tells the story of a series of tragedies caused by the jealousy of four aunts of a big family during the Republican era. The graduation play "Deep Dream" is a combination of dance and drama presented in a new stage form; as the choreographer of this play, I will talk about the creative thinking of this play from the perspective of creation, choreography expression, and the value of the presentation of the three aspects.

Creative perspectives: innovation under demanding conditions

The original "Concubines" is a revelation of the oppression of women by the feudal patriarchy, and at the same time, the women who are trapped under the oppression of this feudal rite of passage are instead competing for favors, cheating each other, and being reduced to the tools to please the men, which is a glimpse of the twisted deformation of human nature under the rotten and old-fashioned rules of the evil ghosts that are eating the people. Someone once commented that Zhang Yimou's Big Red Lantern is the greatest horror movie of all time. Yes, what is really scary is not the ghosts or apparitions, but the cruel social system in that era, like the high wall erected in the deep house, trapping women's hope, living a life of ignorance, and like the walking dead.

The director of the graduation play "Deep Dreams in the Mansion", who is also the playwright, set the tone at the early stage of creation to reduce the expression of the overly depressing atmosphere of the play, but the presentation of the theme is still to reveal the oppression of the feudal and corrupt cannibalistic rites for women, and to reflect the connotation of the drama in a romantic way. The performance form of the play is presented in the form of dance+drama, and the dance takes up nearly half of the play's length. The plot advancement and connection of several key scenes rely on the dance to complete, and the progression and transformation of the characters' hearts and emotions are also chosen to be presented by the dance, while the narrative of the play is completed by the drama.

This kind of serious literary adaptation and realistic drama is usually done as a big production with visually stunning choreography. However, this graduation performance was held in the small theater of our school, with no electric boom, small side stage, limited lighting, and most of all, very little production funds. The limitations of space, theater technology, and financial constraints necessitated the creation of a new idea for the choreography. Although it is performed in a small theater, there are many actors and actresses, the scene scheduling frequency is high, the dance is interspersed with it, and the narrative scene is switched back and forth, the use of space is multi-dimensional, and the demand is complex. Choreography, how to present? Taking into account the large demand for space for dance, there can be no obstacles, drama and the need to support the pivot point, the environment of the instructions should also be clear, and ultimately decided to try to use the Chinese visual aesthetic characteristics - white space. Weakening the figurative deep house, using light to interpret and reflect the dramatic tension, conveying the characters' hearts, leaving enough stage space, point-like figurative pivots to meet the narrative function of the play, while explaining the physical environment. The connotation of the drama is slowly experienced in the audience's immersion in the play, the void also brings imagination, the drama is the need to leave white space, the need to give the audience room for thought.

The expression of choreography: the visual communication of dramatic tension

The choreography of the show coincides with the director's thinking. The director believes that a small theater should have the characteristics of a small theater, although it is not characterized as a pioneering theater to rehearse, but to present a new stage image is a new interpretation of the play.

The main color of the stage is red, which has a distinctive dual nature, and on the one hand refers to festivity. For example, the master of a rich family goes from room to room, and every time he marries his aunt, his wife, and his wife, they are decorated with lanterns and decorations. On the other hand, it refers to blood and terror. Just like this big house, it opens its mouth and swallows these married young ladies; It was also the cannibal feudal ethics of that era that exploited and oppressed women. As the choreography design takes leaving white space as the starting point, the thick wall is replaced by red gauze curtain on the wall of the deep courtyard, which reduces the sense of oppression under the scale of the small theater. Four red gauze curtain translucent screens with a height of 3 meters stand on both sides of the stage, enclosing an empty courtyard space. Each wall is hung with a big red lantern with a diameter of 60 cm, There was a row hanging over the platform. Lanterns are a sign of the play. Whoever the master dotes on is Chang Ming's lantern in front of his door. Over time, the lanterns in this house decide the "life" and "death" of aunts and

wives. The fourth aunt came into the big house and decorated the lanterns. At night, the housekeeper shouted to light the lights. One by one, these bright red lanterns over the stage lit up, and the story began. It was also the beginning of the "cannibalism" of the house.

The Master is a symbol of power in this play, and the director's treatment is to make him hidden in the background but able to control everything. From the design point of view, the visual presentation of the master is also virtualized; a 2-meter-long wooden screen is set up in the middle of the stage, and the hollowed-out area is covered with a translucent silk cloth, which is the master's room; the light from the canopy hits the screen back and reflects the master's silhouette, which is a powerful, oppressive, and irresistible black shadow. The stage creates the environment of each aunt's room with localized realistic scenery. The four high screens standing on both sides of the stage serve as the entrance to each aunt's room during the interpretation of the play, and the furniture and furnishings are formed by a quick change of scene during the light cut. Flexible props not only facilitate the scene switch, but also provide enough space for the dance part of the performance, while ensuring the smooth rhythm of the stage.

In order to meet the director's scheduling needs, the stage can not be too flat, the need for façade space, I set up a simple two-story balcony at the back of the entrance, this performance area can be a roof, can be a theater, can also be the final trial and execution of the third concubine. Based on this space, the director can have more scheduling considerations and designs, which can make the stage presentation more full.

For the women who are trapped in the feudalistic rites and cannot save themselves, I would like to interpret the playwright's connotation of the drama through visual means, and had envisioned pulling several red nylon ropes diagonally above the stage to form a net, which is surrounded by the deep side-stage and feels infinite, covering the deep house and trapping the women of that era. At the same time, it creates some visual impact, making the visual presentation of the stage more metaphorical and reflective. However, due to the limitation of the stage facilities and machinery, as well as the consideration of being a graduation play for the students, this presentation was finally abandoned.

The conception of the stage art of "A Deep Dream" emphasizes the white space and the "emptiness" of the stage, but the emptiness here is not a weakening of the set or the choreography. Instead of utilizing the realistic set to impact the audience's senses, we tried to create an invisible aura to create such an effect. The scale of the small theater stage is just enough to satisfy the psychological perception of smallness, oppression and constraint. The four high walls with red veils are also a metaphor for the tragic end of each woman in the house. The frequent use of dark blue lighting, a ghostly color, also confirms that every woman here has become a walking corpse.

Presentation of values: emotional resonance

General Secretary pointed out that "good works of literature and art should be like the sunshine in the blue sky and the breeze in the spring, capable of enlightening the mind, moisturizing the soul and cultivating the life."

Drama is an art form that allows people to enter a fictional world and experience different emotions and experiences. Its function is not only limited to entertainment and aesthetics, it can affect people's behavior and psychology in different ways, so that the audience can be inspired by

watching it. Stage art is also four-dimensional, at the same time, the integration of space and time, in the theater space under the package of everything on the stage to stimulate the audience, stage art to provide the visual image of the drama to create the illusion, music and sound effects to help the actors to mobilize the audience's emotions, stage lighting to promote the process of time, all the audio-visual elements of the role of the audience's perceptions, a few hours of watching the play will be experiencing the four seasons, experience the feeling of the cold and warmth of the human world. The theater performance conveys the emotion of the audience. The emotions, ideas, concepts and perceptions conveyed by a theater performance are accepted and expected by the audience, which is the value of theater art. The unique vocabulary of theater art has its own deep self-consciousness and resonates with a wide range of emotional ups and downs. If the vocabulary of dramatic art does not catch the audience's attention and emotion, and does not cause emotional resonance, the value of drama will be weakened.

In "Deep Dreams", the fourth aunt enters the mansion, and all the red color on the stage seems to be welcoming the bride at first sight, but with the presentation of the end of each aunt, it is realized that this red color is dyed with blood, just like the modern criminal investigation without luminescent reagents can not see the hidden bloodstains. Emotional drive is with the plot advancing layer by layer, until finally the mansion hung up red lanterns, and in the lights and colors to welcome the five aunts into the door, a kind of fear and despair of psychological feelings emerge, the drama has caused emotional resonance.

The classic drama can be disseminated and preserved must have played a role in alerting the world, revealing social phenomena and arousing reflection. As the most traditional medium and the simplest way of communication, theater serves the general public, builds consensus and resonates with them.

Conclusion

As a part of the drama, stage art uses its own characteristics to convey and express the connotation of the drama; not only that, the drama space created by stage art can also be the characterization of the character, through the borrowing and fusion of other forms of art to condense the visual elements that can set off the character characteristics and highlight the tension of the drama. The form of presentation of stage art can be said to be a play of a pattern, placed in different scales, under different conditions of the performance space, the final presentation of the stage art should also consider the stage art and other factors in conjunction.

Small theater theater often because of the limitations of funds and venues stage art has not done too many attempts, with the development of science and technology as well as the public's need for cultural entertainment, stage art can be combined with new performance space, new forms of performances to do more attempts and explorations.

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Representative inheritor of Guangdong Province Wushu Intangible Cultural Heritage Project Construction of assessment indicator system and quantitative data

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Abstract

The assessment of representative inheritors of wushu non-legacy programs in China has long used general, universal and common assessment methods, lacking a targeted indicator system and quantitative standards. Using research methods such as documentation method, interview method, Delphi method and hierarchical analysis method, we constructed and quantified the assessment index system of representative inheritors of wushu non-heritage items for the protection status quo of representative inheritors of wushu non-heritage items in Guangdong, China, in order to find out the shortcomings of the current assessment status quo and to help carry out the assessment of representative inheritors of wushu non-heritage items in a more scientific, fair and healthy way, which will provide a useful reference.



Full Text Article



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Keywords: Wushu non-heritage program; Non-heritage bearer; Representative bearer of the program; Assessment index system

Introduction

In 1950, the Japanese government enacted the Cultural Properties Protection Law, which for the first time legally defined the scope of "intangible cultural heritage" and included various high-value "skills" mastered by people as objects of "intangible cultural heritage". Intangible Cultural Heritage". Takuji Hamada, in "Cultural Resourcefulness of "Human National Treasures": -The Intangible Cultural Asset Protection System of Japan (Kobayashi Techniques) にみる芸術性と地域性/伝統性-" explains the requirements for the assessment of "Human National Treasures": " ① of exceptionally high artistic value ② occupying a particularly important position in the history of

performing arts and craftsmanship ③ of high artistic value, or occupying an important position in the history of performing arts and craftsmanship, and having distinctive local or genre characteristics." [1]Article 29 of the Law of the People's Republic of China on Intangible Cultural Heritage states, "The competent cultural department of the State Council and the competent cultural department of the people's governments of provinces, autonomous regions and municipalities directly under the Central Government may recognize representative bearers of representative items of intangible cultural heritage approved and announced by the people's governments at their respective levels." [2]Representative bearers of intangible cultural heritage (hereinafter referred to as "representative bearers of intangible cultural heritage", hereinafter referred to as "representative bearers of intangible cultural heritage") are the most dynamic subjects of intangible cultural heritage safeguarding[3], and they are China's "national treasures on earth".

Wushu non-heritage program is mainly composed of traditional boxing styles, and because of the specificity of the program, the group of inheritors has a lot of elusive uncertainties. At present, in the assessment of representative inheritors of wushu non-heritage programs in Guangdong Province, China, the phenomena of "heavy declaration, light protection" and the mismatch between the protection work and the actual economic investment are serious. Evaluation index system is a necessary precondition for scientific evaluation work, and the quantification of targeted, scientific and feasible evaluation index system in line with the current situation of the protection of representative inheritors of Wushu non-heritage programs in Guangdong Province is a realistic need for the implementation of its scientific evaluation work and implementable methods.

Data description

Guangdong As of November 2024, Guangdong Province has recognized six batches of 837 representative bearers of provincial intangible cultural heritage, of which 18 are representative bearers of martial arts intangible heritage and 14 are currently alive, as shown in Table 1.

Table 1 Statistics on Representative Inheritors of Guangdong Provincial Nonheritage in batches 1-6

serial number	name	sex	ethnic group	form	consignent	Project name	Decla-ring area
1	Chen Zhongjie	male	Han	Traditional sports, games and acrobatics	first	Cai Li Fo Quan	Jiangmen
2	Feng Zhen (deceased)	male	Han	Traditional sports, games and crafts	first	Yongchun	Jiangmen
3	Richard Wong	male	Han	Traditional sports, games and acrobatics	second	Nanzhi Quan	Jieyang
4	Huang Zhenjiang	male	Han	Traditional sports, games and acrobatics	third	Cai Li Fo Quan	Foshan

5	Fong Seng Tong	male	Han	Traditional sports, games and acrobatics	third	Cai Li Fo Quan	Guangzhou
6	Mok Pak Shee (deceased)	male	Han	Traditional sports, games and acrobatics	third	Moga Quan	Dongguan
7	Du Jinbin (deceased)	male	Han	Traditional sports, games and acrobatics	third	Long Xing Quan	Huizhou
8	Ye Zhun	male	Han	Traditional sports, games and acrobatics	fourth	Wing Chun	Foshan
9	LEUNG WAI WING	male	Han	Traditional sports, games and acrobatics	fourth	Cai Li Fo Quan	Foshan
10	Zou Qiang	male	Han	Traditional sports, games and acrobatics	fifth	Taixu Quan	Guangzhou
11	Wong Nim-yee	male	Han	Traditional sports, games and acrobatics	fifth	Wing Chun	Guangzhou
12	Chung Chor-ping	male	Han	Traditional sports, games and acrobatics	fifth	Li Jiajiao Quan	Shantou
13	Feng Yanliang (deceased)	male	Han	Traditional sports, games and acrobatics	fifth	Yongchun	Jiangmen
14	Ouyang Yueqiang	male	Han	Traditional sports, games and acrobatics	fifth	Li Jia Quan	Huizhou
15	Zhang Meicheng	male	Han	Traditional sports, games and acrobatics	Sixth	Hung Gar	Zhanjiang
16	CHAN PING YIK	male	Han	Traditional sports, games and acrobatics	Sixth	Li Jiajiao Quan	Jieyang
17	Chen Jian'an	male	Han	Traditional sports, games and acrobatics	Sixth	Mantis Fist	Guangzhou
18	LAM MAN CHIN	male	Han	Traditional sports, games and acrobatics	Sixth	Long Xing Quan	Huizhou

At present, there are 14 representative bearers of Wushu NPOs in Guangdong Province, whose regional distribution is mainly concentrated in the Pearl River Delta (PRD) region and the eastern part of Guangdong, among which there are 10 representative bearers in the PRD region, accounting

for more than 70% of the total. Now, there are four national non-legacy programs (including the expanded list) of wushu in Guangdong Province, namely Cai Li Fo Quan, Wing Chun Quan (Foshan Wing Chun), Mo Jia Quan, and Cai Li Fo Quan (Guangzhou Bei Sheng Cai Li Fo Quan). Among them, Cai Li Fo Boxing was selected as one of the second batch of national intangible heritage list in 2008, and it has been more than fifteen years since it was selected as one of the national projects, during which the inheritors have been insisting on making declarations, but they have not been able to pass the assessment, and there is even no representative provincial intangible heritage inheritors in the project of Wing Chun Boxing (Foshan Wing Chun Boxing) for the time being. The lag in the construction of the assessment system has aggravated the scarcity of representative inheritors of Guangdong Wushu Intangible Cultural Heritage. The assessment of representative inheritors of Guangdong Wushu NHLs is mainly carried out in the form of a combination of audit and expert group review, and the specific assessment indexes have not been quantified. The lack of clarity of the assessment indexes has led to the fact that the inheritors cannot fully understand their own deficiencies in time, from which they can improve their learning, which in turn affects the efficiency of the assessment work.

Experimental design, materials and methods

First, initial construction of a library of assessment indicators. The author extracted and categorized high-frequency vocabulary indexes through the ROST Chinese text frequency statistical analysis software for the "Representative Inheritors of Intangible Cultural Heritage Recognition and Management Measures" at all levels in twenty-two Chinese provinces (except for Taiwan Province) and four municipalities directly under the central government, and initially constructed the "Representative Inheritors of Intangible Cultural Heritage" in Guangdong Province by combining the results of relevant literature and the current status of the assessment of Guangdong's wushu intangible cultural heritage. The evaluation index library is shown in Table 2.

Table 2 Guangdong Wushu Non-legacy Representative Inheritors Evaluation Indicator Library

serial number	Level 1 indicators	Secondary indicators	Main Observation Points
1	ethics	social morality	Law-abiding, no criminal record
		personal integrity	Personal style
			Honesty and integrity, with no record of falsification
2	theoretical level	Knowledge of non-fertilization	Mastery of the basic theory of non-heritage
			Theoretical mastery of Wushu non-

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			legacy
		Project Knowledge	Availability of project information
			Master-disciple relationship and genealogy
			Degree of mastery of technical theory and techniques
			Exercise Methods
3	skill level	technical expertise	Degree of mastery of technical system content
			Exercise of core skills
		technical characteristic	Level of mastery of landmark technologies
			Mastery of Signature Practices
			Mastery of iconic usage
		technical certificate	Technical exercises and their visualization
			Technical Achievements
			Peer evaluation status
		teaching ability	Quality of human resources training
		educational voucher	Teaching process and its visualization
		professionalism	Ownership of canonical kung fu manuals and other materials
			Degree of mastery of specialized skills
			Exercise and instructional video situations
transferability	How to pass on your art		
	Methods of passing on the art		
	Communication Effect		
4	working	sense of responsibility	Development of the practice plan

	attitude		Hours of work in the project's circulation areas
5	working practice	Practice	Completion of practice objectives and tasks
			Number of times participating in heritage practices
			Participation in learning and training
6	Contribution of work	Passing on the situation	Genealogical situation
			Scale and quality of human resources training
			Size of the heritage radiation area
		Scale of transmission	Scale of talent development
			Size of the heritage radiation area
		social influence	Level of recognition of heritage sites
			Degree of regional recognition of heritage radiation
			External exchanges
		Passing on the results	Passing on the length of the program
			Length of time recognized as a representative bearer
			Technical Achievements
		Implementation of public welfare activities	Status of implementation of the project in the declared location
			Implementation of the project's legacy in the region of radiation
			External exchanges
		Project archiving and its management	personal resume
period of experience (esp. in business)			
Length of time recognized as a			

			representative bearer
			Retention of project information, physical items, etc.
		Authenticity of the content of the heritage	Completeness of canonical books and genealogical records
			Skill exercise level
			Status of teaching video materials

Second, initial screening of indicators for tier assessment based on the interview methodology. Through interviewing 13 provincial experts from various cities and municipalities (including ethnic traditional sports, folklore, opera and dance) who have been engaged in NRL work in Guangdong Province of China for many years, 5 Guangdong provincial Wushu NRL representative inheritors, 8 folk Wushu NRL inheritors, and 4 NRL project inheritors involved in skills, opera and folklore, the author has looked at the positioning and responsibilities of the Wushu NRL representative inheritors, the inheritance and conservation practice, the current status of the assessment process and existing problems, etc., to conduct interviews and initially screen the indicators at each level.

Guangdong Wushu representative heritage assessment of the first level of indicators is based on laws and regulations, combined with expert interviews from the inheritor of the screening. The evaluation index system is planned to be constructed in five aspects, namely, "virtue", "ability", "diligence", "performance" and "integrity". Integrity" five aspects of the construction. However, in China, the subsidies for non-genetic heritage bearers are only 20,000 RMB per person per year, even if they reach the "national level", and the assessment of their conduct is more about the constraints on their morality, so the constraints on "integrity" are categorized under the "moral" aspect. Therefore, the constraints of the "integrity" latitude are subsumed into the assessment of the "virtue" latitude.

Through interviews with several Chinese experts, the author found that most of the Chinese experts agreed with this categorization, so these six aspects were screened as the first-level indicators for the assessment of Guangdong's Wushu NRL representative inheritors, as shown in Table 3.

Table 3 Results of the preliminary screening of primary indicators

dimension (math.)	Level 1 indicators
virtue	ethics
ability	theoretical level
	skill level

diligence	working attitude
	working practice
performance	Contribution of work

The Level 2 indicators and their main observation points are screened on the basis of the primary indicators, combined with the results of relevant literature and the current status of the assessment of the representative inheritors of Wushu non-heritage in Guangdong Province, and 12 secondary indicators and 29 main observation points are initially screened, as shown in Table 4.

Table 4 Results of the preliminary screening of Level 2 indicators and their key observation points

Level 2 indicators	Main Observation Points
social morality	Compliance with the law and a clean criminal record
personal integrity	Personal style
	Honesty and integrity, with no record of falsification
Knowledge of non-fertilization	Mastery of the basic theory of non-heritage
	Theoretical mastery of Wushu non-legacy
Project Knowledge	Degree of mastery of technical theory and techniques
	Exercise Methods
technical expertise	Degree of mastery of technical system content
	Exercise of core skills
transferability	How to pass on your art
	Methods of passing on the art
	Communication Effect
technical certificate	Technical Achievements
	Peer evaluation status
sense of responsibility	Development of the practice plan
	Hours of work in the project's circulation areas

Practice	Completion of practice objectives and tasks
	Number of times participating in heritage practices
	Participation in learning and training
Passing on the situation	Scale and quality of human resources training
	Size of the heritage radiation area
Implementation of public welfare activities	Implementation at the project site
	Implementation of the project's legacy in the region of radiation
	External exchanges
Project archiving and its management	personal resume
	period of experience (esp. in business)
	Length of time recognized as a representative bearer
	Retention of project information, physical items, etc.

Third, re-screening of tier assessment indicators based on the Delphi method. The Delphi method is an improved expert opinion method, and the selection of consulting experts is particularly important in the process of its application and practice. According to the requirements of the Delphi method, the number of selected experts should be at least 8-10 people, and the decrease of error is not obvious after more than 13 people, and it is generally appropriate to control the number of experts below 15, and when the number of experts is close to 15, then increasing the number of experts will not have too much impact on the statistical results. [4] The author will make an expert questionnaire from the above preliminary screening of the tier assessment indicators, select 13 experts, after three rounds of expert questionnaires, modify the assessment indicators according to the experts' opinions, and finally construct an assessment indicator system for representative inheritors of Guangdong Wushu non-legacy, as shown in Table 5.

Table 5 Assessment index system of representative inheritors of Wushu non-legacy in Guangdong Province

Assessment dimensions	Level 1 indicators and weighting factors	Level 2 indicators and weighting factors	Main Observation Points and weighting factors
virtue	ethics	social morality	Compliance with the law and a clean criminal record

		military ethics and morals	Personal style
			Any record of falsification
ability	theoretical level	Knowledge of non-fertilization	Mastery of the basic theory of non-heritage
			Theoretical mastery of Wushu non-legacy
		Project Knowledge	Degree of mastery of technical theory and techniques
			Degree of mastery of the practice method
	skill level	technical expertise	Rehearsal of boxing routines
			Instrumental routines rehearsal situation
			Scattered Hands and Disarming Moves Drills
			Exercise of core skills
		transferability	How to pass on your art
			Methods of passing on the art
			Communication Effect
		technical certificate	Technical Achievements
	Peer evaluation status		
	diligence	Passing on the attitude	sense of responsibility
Hours of work in the project's circulation areas			
Heritage in Practice		Practice	Completion of practice objectives and task
			Number of times participating in heritage practices
		Practice	Completion of practice objectives and tasks

performance	Contribution of the heritage	Apprenticeship	Scale and quality of human resources training
			Size of the heritage radiation area
		Implementation of public welfare activities	Implementation at the project site
			Implementation of the project's legacy in the region of radiation
			External exchanges
		Project archiving and its management	personal resume
			period of experience (esp. in business)
			Length of time recognized as a representative bearer
			Retention of project information, physical items, etc.

Last, Quantification of indicators at each level of the assessment indicator system. Weights are quantitative values that measure the relative importance of the thing being evaluated in the aggregate in some quantitative form[5]. The author distributed the weighting questionnaire to the experts. A total of 10 questionnaires were distributed, 10 questionnaires were recovered, with a recovery rate of 100%, and Excel tables were used to establish a matrix of the content of the constructed indicators, and the questionnaires of 10 experts passed the consistency test. In the processing and calculation of the data, the Mysore AHP hierarchical analysis software was used to analyze. Avoiding the error of manual calculation, finally the weight coefficients of the assessment indicators of each level were summarized, as shown in Table 6.

Table 6 Weighting coefficients of indicators at each level of the Guangdong Wushu Representative Inheritors Assessment Indicator System

Assessment dimensions	Level 1 indicators and weighting factors	Level 2 indicators and weighting factors	Main Observation Points and weighting factors
virtue	ethics 0.1277	social morality 0.094	Compliance with the law and a clean criminal record 0.0094
		military ethics and morals 0.0341	Personal style 0.012
			Honesty and integrity, with no

			record of falsification 0.0221
ability	theoretical level 0.1534	Knowledge of non-fertilization 0.0348	Mastery of the basic theory of non-heritage 0.0128
			Theoretical mastery of Wushu non-legacy 0.022
		Project Knowledge 0.1186	Degree of mastery of technical theory and techniques 0.0777
			Degree of mastery of the practice method 0.0409
	skill level 0.3325	technical expertise 0.1857	Rehearsal of boxing routines 0.0346
			Instrumental routines rehearsal situation 0.0345
			Scattered Hands and Disarming Moves Drills 0.0489
			Exercise of core skills 0.0677
		transferability 0.0804	How to pass on your art 0.0214
			Methods of passing on the art 0.0215
			Communication Effect 0.0375
		technical certificate 0.0064	Technical Achievements 0.0332
	Peer evaluation status 0.0332		
	diligence	Passing on the attitude 0.097	sense of responsibility 0.097
Hours of work in the project's circulation areas 0.0508			
Heritage in Practice 0.1051		Practice 0.1051	Completion of practice objectives and tasks 0.0437
			Number of times participating in heritage practices 0.033
		Practice	Completion of practice objectives

		0.1051	and tasks 0.0437
performance	Contribution of the heritage 0.1843	Apprenticeship 0.0893	Scale and quality of human resources training 0.0426
			Size of the heritage radiation area 0.0467
		Implementation of public welfare activities 0.0405	Implementation at the project site 0.0236
			Implementation of the project's legacy in the region of radiation 0.0111
			External exchanges 0.0058
		Project archiving and its management 0.0546	personal resume 0.0116
			period of experience (esp. in business) 0.0071
			Length of time recognized as a representative bearer 0.0051
			Retention of project information, physical items, etc. 0.0308

According to the weight of each indicator to determine the score of each indicator, the scoring standard of the secondary indicators is divided into five grades: 1.0, 0.8, 0.6, 0.4 and 0. The declared inheritors are scored according to the main observation points of the secondary indicators, and the actual score of each indicator is multiplied by the score of the indicator to be the score of the indicator, and finally, the scores of the indicators are added up to be the total score of the inheritor. The assessment scale of representative inheritors of Guangdong Wushu non-legacy is shown in Table 7.

Table 7 Assessment Scale for Representative Inheritors of Wushu Non-legacy in Guangdong Province

dimension (math.)	Level 1 indicators	Level 2 indicators	Main Observation Points	value of a score	Assessment rating factor					score
					1	0.8	0.6	0.4	0	
virtue	Ethics (12)	social morality (9)	Compliance with the law and a	9	very positive	more active	general	mildly	(negative)	
					there are	/	/	/	not have	
		military ethics and morals	Personal style	1	very good	relatively good	basically good	not too	(negative)	
				2	there are	/	/	/	not have	
ability	Theoretical level (16)	Knowledge of non-fertilizat	Mastery of the	1	realise	relative ly	basic underst	Not really	(negative)	
				2	realise	relative ly	basic underst	Not really	(negative)	
		Project Knowledge (13)	Degree of	8	very compl	relative ly	basically	incomplet	(negative)	
				5	very compl	relative ly	basically	incomplet	(negative)	
	Skill level (33)	technical expertise (19)	Rehearsal of	Instrumental	3.5	very high	Superior.	general	Not too	(negative)
					3.5	very high	Superior.	general	Not too	(negative)
			Mastery of core	5	very high	Superior.	general	Not too	(negative)	
				7	very compl	relative ly	basically	incomplet	(negative)	
		transferability (8)	How to pass on	2	It's very	richer	general	Not so	unitary	
				2	It's very	richer	general	Not so	unitary	

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			Communication	4	prominent	relatively	general	Not really	(negative)
		technical certificate	Technical	3	very high	Superior.	general	Not too	(negative)
			Peer evaluation	3	very high	Superior.	general	Not too	(negative)
diligence	Heritage Attitude (9)	sense of responsibility (9)	Development of	4	perfect	relatively	basically	less refine	(negative)
			Hours of work	5	≥30	29-25	24-20	19-15	15>
	Heritage in Practice (12)	Practice (12)	Completion of practice	6	overachieve	Fully accomplished	fundamentally complete	Partially complete	incomplete
			Number of times	3	>7	7-6	5-4	3-2	1-0
			Participation in	3	>7	7-6	5-4	3-2	1-0
performance	Legacy contribution (18)	Apprenticeship (9)	Scale and	4	>7	7-6	5-4	3-2	0-1
			Size of the	5	every country	Domestic	this province	our city	region
		Implementation of public welfare activities	Implementation	2.5	>7	7-6	5-4	3-2	1-0
			Implementation	1	>7	7-6	5-4	3-2	1-0
			External exchange	0.5	>7	7-6	5-4	3-2	1-0
		Project archiving and its management (5)	personal resume	1	perfect	relatively	basically	less refine	not have
			period of	0.5	≥40	35-39	30-34	25-29	20-24
			Length of time	0.5	≥12	11-9	8-6	5-3	2-0
			Retention of	3	very complete	relatively	basically	less incomplete	(negative)

The three representative inheritors of Guangdong Wushu non-legacy who participated in the empirical study were one from Guangzhou City, one from Huizhou City and one from Foshan City.

Inheritor A is a representative inheritor of municipal-level non-legacy, from Guangzhou City, the inheritance program is "Wing Chun (Guangzhou Tianhe)". Inheritor A has been practicing Wing Chun for many years, and has actively participated in Wing Chun inheritance practice activities, and has won the first place in the national and provincial martial arts championships and other honors.

Inheritor B comes from Huizhou City, and his inheritance program is "Li Family Fist". Inheritor B started to learn Li Family Fist at the age of 12, and is the seventh generation of "Li Family Fist", one of the five famous fists in Guangdong. Inheritor B has inherited the Li Family Boxing for more than 30 years, with excellent boxing skills, good at making long knives, and has won many awards in international, national, provincial and municipal Wushu Championships. Since 2008, Inheritor B has established Li Family Boxing training bases and training courses in Henan Bank Central Primary School, Bintang Primary School and Hushan Primary School, and served as a coach. He has been invited to teach Li Family Boxing at Sun Yat-sen University, South China University of Technology, Huizhou College and other colleges and universities for a number of times.

Inheritor C is a representative inheritor of municipal-level non-legacy, from Foshan City, inheriting the program "Cai Li Fo Quan (Foshan)". Inheritor C has been deeply engaged in the teaching and inheritance of Cai Li Fo Quan for many years, and has won many awards in national, provincial and municipal martial arts competitions.

In order to verify the validity of the assessment index system of Guangdong Wushu non-heritage representative inheritors constructed above, it needs to be applied in the context of the actual situation. In this paper, three Guangdong Wushu non-heritage representative inheritors participating in the Guangzhou Wushu non-heritage inheritors workshop (public welfare - the first phase) were selected for the empirical study, and the assessment results were obtained, as shown in Tables 8, 9, and 10.

Table 8 Statistics of empirical results of heir A

master	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
ethics	11.9	11.8	11.5	11.8	11.7
theoretical level	12.1	12.3	12.1	12.2	12.2
skill level	26.7	27.1	26.7	26.9	26.3
Passing on the attitude	8.2	8.2	9.1	8.5	8.7
Heritage in Practice	9.4	9.2	9.1	9.2	9.3
Contribution of	14.2	14.2	14.1	14.5	14.6

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the heritage					
Total score (and)	82.5	82.8	82.6	83.1	82.8
Average total score			82.76		
hierarchy	100 \leq Excellent \leq 90 90 \leq Good \leq 80 80 \leq Medium \leq 70 70 \leq Passed \leq 60 Failed $<$ 60				

Table 9 Statistics of empirical results of heir B

master	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
ethics	11.3	12	11.9	11.5	11.7
theoretical level	11.1	11.2	10.8	11.3	10.9
skill level	27.7	28.1	28.7	28.4	28.3
Passing on the attitude	8.7	8.6	8.8	8.5	8.4
Heritage in Practice	9.6	9.8	9.5	9.7	9.9
Contribution of the heritage	15.9	15.1	15.2	15.7	15.6
Total score (and)	84.3	84.8	84.9	85.1	84.8
Average total score			84.78		

Table 10 Statistics of empirical results of heir C

master	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5
ethics	11.9	11.8	11.6	12	11.7
theoretical level	11.1	11.5	11.4	11.6	11.5
skill level	27.4	27.1	27.7	27.2	26.3
Passing on the attitude	9.2	9.2	9.1	8.9	8.7
Heritage in	9.1	9.3	9.5	9.2	9.3

Practice					
Contribution of the heritage	14.2	14.2	14.1	14.5	14.6
Total score (and)	82.9	83.1	83.4	83.4	82.1
Average total score	82.98				
hierarchy	100 \leq Excellent \leq 90 90 \leq Good \leq 80 80 \leq Medium \leq 70 70 \leq Passing \leq 60				

The three representative bearers of Wushu NRLs attended the Guangzhou Wushu NRLs Training Course (Public Welfare - Phase I) and completed the training program, passing the final examination and obtaining the certificate of completion, in which I participated as a staff member of the training course. Calculation results show that the three Guangdong Wushu Nongenetic Representative Inheritors are all at a good level. From the scores of the six first-level indicators, the three Wushu Nongenetic Inheritors have relatively high scores in terms of skill level and moral integrity, reflecting that the five Inheritors basically have superb martial arts skills and good moral integrity, while the theoretical level is a relatively weak part of the four dimensions.

On the whole, through the comprehensive assessment of the three representative inheritors of wushu non-legacy, experts believe that the actual score can basically reflect the four dimensions of the inheritor's "virtue", "ability", "diligence", The experts believe that the actual score can basically reflect the comprehensive situation of the four dimensions of "virtue", "ability", "diligence" and "performance" of the inheritor, and it is highly operable and practical in practical application. Therefore, experts believe that the assessment index system constructed by this study can objectively reflect the current situation of the assessment of the representative inheritors of Wushu non-heritage in Guangdong Province, and can help the inheritors to understand more clearly which aspects of their own inheritance work in which areas they have done a good job, and which aspects can be improved, so as to make the assessment work more open and transparent, and to reduce the disputes arising from the assessment work, which is practicable in reality.

Conclusion

At present, the representative inheritors of wushu NRLs in Guangdong, China, have the status quo of group aging, slow transformation of economic benefits of inheritance, etc. Some wushu NRLs are facing the inheritance crisis, and the establishment of an assessment index system to quantify the assessment criteria can help the assessment of representative inheritors of wushu NRLs in Guangdong, China, to be more fairly and healthily carried out. The assessment of theoretical level and skill level in this index system still belongs to the stage of fuzzy assessment, mainly relying on the subjective judgment of the assessment experts, which is also the focus and difficulty of the assessment work of the representative inheritors of wushu non-heritage. It is suggested to try to include the "iconic" assessment of the fist in the theoretical level assessment, and form a sample of written records, as well as to include the

physical confrontation link in the technical level assessment, so as to invite the assessment experts to participate in the assessment with the inheritors, and to perceive the offensive and defensive characteristics of the Wushu NLM programs in a more realistic way.

This study is the construction of the assessment index system for the representative inheritors of wushu non-legacy in Guangdong, China. Since no scholars have carried out relevant and similar studies on it before, the constructed assessment index system may need to accumulate more empirical experience in the process of actual use, give full play to the evaluation, orientation and motivation of the assessment index system, and update and develop it in practice, and at the same time, it is hoped that it will be helpful for the related functional management and seek a breakthrough for the next development of this assessment index system.

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Conflict of Interest

We declare that we have no known conflicting financial interests or personal relationships that could have appeared to influence the work reported in this article.

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