Reverse Teacher Questioning Strategy to Enlarge ZPD! ---- A New Approach to Improve Differentiated Classroom

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Abstract

Differentiated instruction has always been a major challenge for educators, and how to balance the learning tasks of diverse levels of learners is at the top of the list. This research is based on further exploration of the ZPD theory through quantitative analysis of the research methodology and in-depth one-on-one interviews with 12 students from an international high school in Shanghai, China. The research found that learners were not offended by tiered tasks itself, but they were offended by being assigned different tiers of tasks by their teachers and expected that they would have the choice of different learning tasks. For learning tasks, learners prefer more challenging tasks, and the reverse teacher questioning strategy, i.e. 'hard-to-easy' teacher questioning strategy, can effectively help learners to develop the ability to solve complex tasks. This constructed learning ability effectively teaches learners to ask questions, understand questions, analyse questions, and solve them. This ability can contribute to expanding the ZPD of learners with different abilities and narrowing the ability gap in a mixed ability classroom.

Full Text Article

Keywords: ZPD;Teacher Questioning;Differentiation

Introduction

With the increasing number of learners educated from diverse backgrounds, the phenomenon of mixed ability in the classroom has gradually intensified, posing a considerable challenge for educators when teaching (Tsiplakides, 2018). These challenges encompass polarized classroom participation (Bellil, 2020), difficulty in balancing classroom progress (Hordiienko & Lomakina, 2015), and so on. As a positive response to the range of concerns surrounding mixed ability classrooms, differentiation has been introduced as an approach of coping with learner diversity to support personalised demand satisfaction for all learners from diverse backgrounds (Eikeland & Ohna, 2022). Tracking, as a method has been used for centuries in various countries such as, the UK (Ireson & Hallam, 2001) and China (Zhang & Bray, 2017), aims to minimise the pedagogical

challenges that may arise from ability differentiation by classifying mixed-ability learners into different classes for separate courses. However, such organisational differentiation can hardly perfectly stratify learners accurately, and there could always remain learners classified in unsuitable levels of courses (J. Scattergood, 2024). In addition, the dominant criteria for determining learner tiers in most schools continues to be academic performance (Ireson et al., 2005), which neglects other dimensions of competence. According to the Multiple Intelligences Theory proposed by Gardner (1983), a single criterion of intelligence to measure learners' abilities is considered incomplete. Consequently, the limitations of organisational differentiation have highlighted the emergence of the concept of instructional differentiation (Tomlinson, 2001). In other words, due to the inevitability of mixed-ability classrooms, educators' responses to such situations largely influence the quality of school instruction and learners' learning experiences (Hamre & Pianta, 2005).

Instructional differentiation has always been regarded as a creation to increase educational equity by providing equal curriculum resources to learners from different contexts (Valiandes, 2015), whereas it can occasionally in turn become a tool for educators to lower their expectations of their students (Schmoker, 2010). Educators' low or differentiated expectations can greatly exacerbate negative attitudes towards learning for some learners, especially for marginalised learners (Moon, 2005). In light of this concern, Wass & Golding (2014) argue that believing in the potential of all learners and helping them to progressively expand their ZPD (zone of proximal development) is a stronger way to motivate active learning than simply tiered instruction based on ZPD. ZPD means the gap between a learner's ability to solve a problem with assistance and independently (Yaroshevsky, 1989). Educators, as important roles during their students' learning process (Larina & Markina, 2019), can be a powerful support for scaffolding learners and then gradually remove the scaffolding to help learners develop independent learning skills and expand their own ZPD (Wass et al., 2011).

Currently, for methods of enlarging ZPD, many studies (Hussin, 2008; Mehri Kamrood et al., 2019) have mainly focused on the the power of online information technology, which can facilitate educators to dynamically monitor the ZPD of their students, and thus develop personalised learning plans tailored to the learners that can help to enlarge their ZPD. However, teacher questioning, as one of the most direct and frequently approached assessment tools by educators has been shown to be a useful way of motivating learners, dynamically assessing them, and assisting eduactors to adjust teaching strategies for them (Zuraidah Nasution & Syafrina Prihatini, 2024). Prior research has established that it is beneficial to cultivate learners with a larger ZPD for mixed-ability classrooms (Wass & Golding, 2014), but the specific ways in detecting dynamic changes in a learner's ZPD and enlarging it have been less frequently mentioned. Therefore, this research primarily aimed to discuss the role of using teacher questioning to support students in enlarging their ZPD on instructional dilemmas within the context of a mixed-ability classroom. Specifically, this research has been designed to fill the gap in this research area by scrutinising student perceptions of differentiated classrooms, expansion of ZPD, and teacher questioning methods through in-depth interviews that focus on student voices.

Literature Review

Differentiated instruction

Differentiated instruction is differed from streamed classes as it aims to assist learners to achieve the same learning goals by implementing different teaching strategies within one class with mixed-ability learners (Eikeland & Ohna, 2022). Differentiated instruction attempts to maximise equal knowledge and possibilities for all learners as a way to increase educational equity (Valiandes, 2015). Therefore, differentiated instruction requires educators to tailor their teaching strategy to each learner. As early as the late 1960s, Bloom's (1968) theory of mastery learning emphasised that education should allow each learner to acquire the same level of knowledge with customised learning styles. In response to the reality that customising teaching strategies for each learner is challenging to achieve, Tomlinson (2003) further proposed tiered activities as an effective approach to reducing teachers' workload, aiming to distribute appropriate learning tasks to different levels of learners. This activity is in line with the concept of tailored instruction, which attracts many scholars to research it in depth from a variety of perspectives, mainly categorised into research related to learning tasks and evaluation of learners' levels.

In research on learning tasks, most scholars advocate providing learners with a diverse choices of learning tasks to meet their different learning styles. Diverse tasks have been mainly categorised into tasks of different forms and tasks of different difficulty levels. Tasks in diverse forms can better stimulate students' multiple intelligences and promote active learning. Tomlinson & Moon, (2014) state that not every learner is good at writing essays and that learning tasks should be given to learners with options based on their different learning preferences and learning levels. Similarly, Hanewicz et al., (2017) proved this by analysing the results of cafeteria-style grading at an online university, allowing learners to self-select the course tasks that suit them can lead to increased motivation and better academic performance than ever before, as well as promoting educators to offer tasks that further reflect learners' creativity. However, considering the workload of educators and the pedagogical pressure to cope with entrance exams, tiered assignments are more often used in the three stages of further education: primary, secondary, and high school, as it is easier for educators to manage (Kanevsky, 2011). In a mixed-ability classroom, educators may spend more time with learners who require assistance to ensure they can keep up with the pace of instruction for the sake of balancing the pace of instruction, which may result in them neglecting to pay attention to intermediate learners and top learners (Mills et al., 2014). Tiered tasks can alleviate this problem effectively by allowing learners at different levels to complete tasks that match their ability levels, thereby achieving their respective learning goals and gaining a sense of self-efficacy. Kanevsky (2011) conducted a quantitative study of learning preferences of 416 gifted learners and 230 learners who were not identified as gifted and found that the majority of gifted learners tended to learn at their own pace rather than wait for those who were lagging behind, whilst those who were more behind in their learning did not want to learn under the pressure of having to catch up with their peers and were likely to be more passive. Thus, tiered tasks can contribute to motivate different hierarchical groups of learners to some extent. However, there is also a group of learners who believe that tiered tasks represent the educator's expectations, and therefore they will expect more than they are able to do because they believe that difficult tasks represent their abilities and do not want to be inferior in their classroom relative to their low position (Vehkakoski, 2012). To provide learners with diverse and high-quality learning tasks, educators' expertise in differentiated

instruction is particularly important (van Geel et al., 2018). Indeed, educator preparation levels can largely and directly affect the outcomes of differentiated instruction (Pham, 2011). An educator who can design learning tasks in advance that are aligned with the instructional objectives is more likely to make the instructional purpose of each learning task clear to the learner, thus helping the learner to better understand the purpose of the task and motivate active learning (Van Geel et al., 2018). In addition to this, the educator's ability to dynamically evaluate the learners nearly determines the effectiveness of the implementation of differentiated tasks. Since the learners' learning situation can be dynamic, the lesson plans and learning tasks should have to be adapted and changed in a timely manner so as to ensure that the learners are motivated to learn (Mills et al., 2014).

Evaluating learner levelling is a complex job for educators and there are many aspects to be considered as incorrectly levelling can cause learners to have negative attitudes towards learning (Moon, 2005). Establishing tiered criteria is the first and most critical step in this complex endeavour. Levy (2008) discovered through an educator's perspective research that evaluation of learners should not be categorised from a single standardised academic result, but rather learners' learning needs, interests and learning styles should be taken into account in determining their tier. However, Logan (2011) recognises this view whilst emphasising the important reference value of the learner's level of readiness to learn, i.e. the level of existing knowledge and ability. In fact, educators with a profound comprehension of subject knowledge along with effective assessment methods can synthesise learners' learning preferences on top of their current academeic results, and make suitable decision-making recommendations for learners' tiering, which can maximise learners' motivation and academic performance (van Geel et al., 2018). It is worth noting that differentiated task tiering evaluations are recommended to be conducted at a regular frequency. Robinson et al., (2014) found from the voices of nine educators at different stages of education that differentiated evaluation needs to be a regular frequency and emphasise opportunities for re-appraisal so that it promotes learner motivation for progression. Instead, learners may become stressed and burned out by too frequent assessments, and it can be quite challenging for educators to see milestones of learner progress in a short period of time. In summary, the differentiated tiers need to be mobile to match the dynamic learning state of the learner and to empower the learners with confidence.

Enlarging ZPD and Teacher Questioning

Zone of proximal development (ZPD) is a concept developed by Vygotsky (1978) which means the distance between what a person can do with and without assistance. Lowering every learner to the same level to facilitate uniformity in teaching and learning schedules is not the original purpose of education and fails to satisfy the demands of different learners (Vygotsky , 1997). Therefore, ZPD can be a direction for educators to assess learners in the process of differentiated instruction to provide learners with the most suitable learning tasks (Magableh & Abdullah, 2021). Appropriate learning tasks under the principle of differentiated instruction should be higher than the learner's current level (Morgan, 2014) since this can greatly reduce the negative emotions that different ZPD learners may have towards learning, as learners with higher levels of proficiency may become bored with simple learning tasks, while learners with more lagging proficiency may become frustrated and unconfident with difficult tasks. Scaffold support is recognised as enabling learners to achieve goals

that were once unable to complete independently by the support of educators (Davis & Miyake, 2004). Learners can acquire methods for completing tasks from educators, and when learners have mastered the methods, the educators remove the scaffolding support, allowing learners to expand the scope of what they can do (Wass et al., 2011). (As shown in figure 1 and 2)
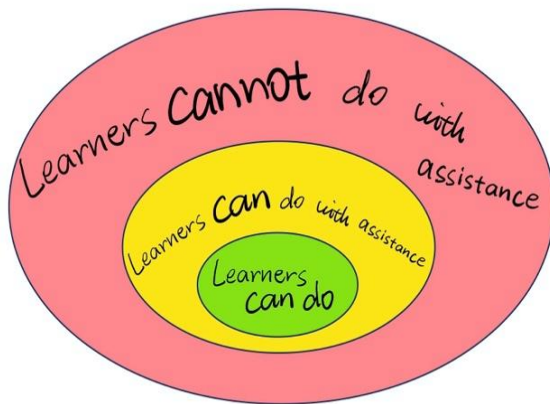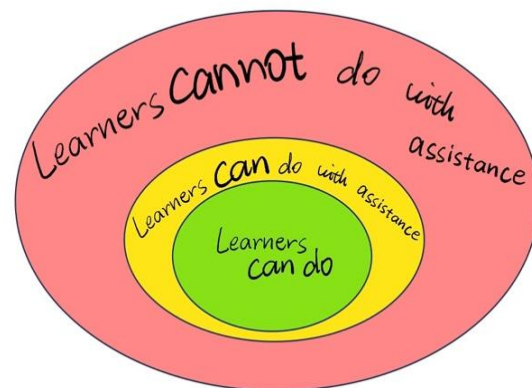

Figure 1: Learners' original ZPD

Figure 2: Learners' ZPD with scaffolding support

However, while this model does assist learners to a certain extent in progressively improving their competence, it is mainly focused on helping learners with a particular task. As learning is a constructive process (Reiser, 2004), simply improving learners' ability to acquire a specific task is hardly likely to alleviate the problem of differentiation in mixed-ability classrooms in the short term, and may even instead exacerbate the gap in ability between learners as learners at different levels are all improving the range of what they can do, making it more difficult to balance the instructional progression. In addition to this, Bodrova & Leong (2024) found that the zone in the ZPD represents that it is a developmental range rather than a fixed point (as shown in figure1). Learners' changing ZPD may allow educators to make incorrect ZPD assessments, which may cause a regression in their ZPD due to learning tasks that are behind their potential (Eun, 2019). In other words, learners may be less capable of doing as a result of incorrect teaching strategies. (As shown in figure 1 and 3)
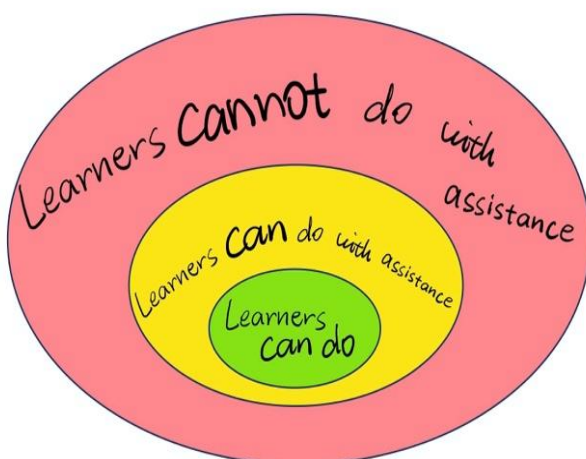

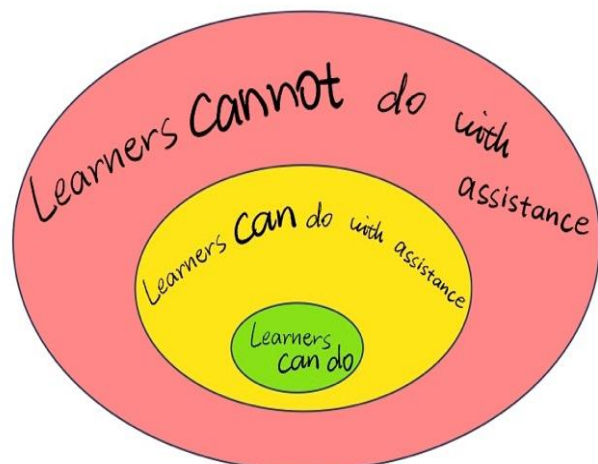**Figure 1: Learners' original ZPD**

Figure 3: Learners' ZPD with incorrect teaching strategies

Learning is the reward of overcoming challenges (Reiser, 2004). When educators believe that every learner has the potential to master high-level tasks and provide structured approaches to tackling the challenges during class, there is a high possibility that learners will be motivated and work hard to achieve higher levels of academic performance with after-school time (Carroll, 1963). Suprayogi et al. (2017) survey of a random sample of educators from 145 schools in Indonesia confirms that the level of educators' recognition of constructivist instruction does strongly contribute to the outcome of differentiated instruction. The 483 learners from 8 schools in America also felt that they preferred equal learning opportunities, especially when they benefited from the educator's teaching strategies, they would also be more responsive to the learning tasks given by the educators, then this could be beneficial in alleviating the problem of differentiation in mixed ability classrooms (Rajeh Alsalhi et al., 2021). Thus, rather than having educators directly help learners to solve specific tasks, the process of teaching them to construct learning expands the possibilities of learners' potential, that is, the range of what they can do with assistance is enlarged (Reiser, 2004). (As shown in figure 1 and 4).
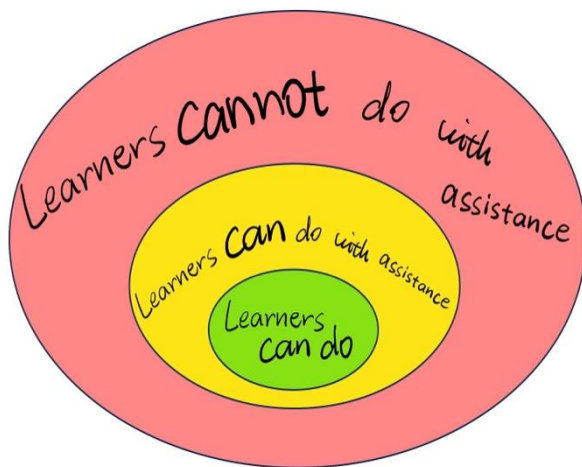

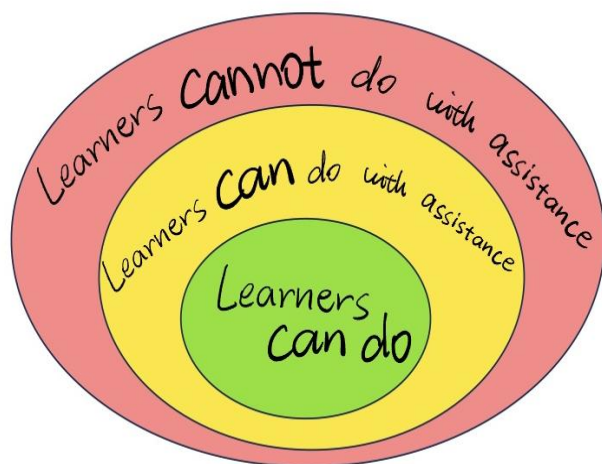**Figure 1: Learners' original ZPD**   **Figure 4: Learners' ZPD with constructivist instruction**

In brief, enlarging the ZPD means expanding learners' potential and offering opportunities for learners to study independently after classes, which is likely to bridge the gap between mixed-ability learners more rapidly.

Enlarging ZPD means that educators need to teach learners to construct learning skills beyond the purpose of completing a single task, i.e. learners have to learn to raise questions, analyse them and then solve these questions independently (Jiang et al., 2022). For the learner's ability to construct learning skills which is not easy to be noticed, this internal potential requires the guidance and support of a more professional and more experienced person (Yaroshevsky, 1989). In differentiated instruction, educators can become this role through effective teaching strategies. Teacher questioning, as an effective formative assessment tool, can not only constantly monitor learners' dynamic learning (Martin-Beltrán et al., 2017) and enhance learners' attention in the classroom (Fraser, 2000), but also promote learners' logical thinking skills (Brough, 2012) as a way of

broadening learners' potential ZPD and promoting them as more independent learners. As a dynamic learning assessment tool, the core of teacher questioning （TQ） is to capture learners' performance data to inform classroom instructional planning (Heritage & Heritage, 2013), so class engagement is extremely important. Learners' engagement in a differentiated classroom is primarily related to the learning environment and the educators' feedback (Wass & Golding, 2014). Learners often hesitate to challenge for fear of not receiving useful feedback and being teased. Educators can support learners to identify their mistakes and find the right answers on their own through guided questioning, which can give them more confidence in learning as well as develop their reflective skills and independent learning skills (Harlen, 2001). The whole-class oriented educator questioning style of collective dialogue can also engage more learners in classroom dialogue by creating an atmosphere of teacher-student co-participation (van Compernolle & Williams, 2013). As a tool for cultivating thinking skills, TQ needs to be conducted in a logical order. Progressive questioning, a questioning approach that allows each learner to gradually transition to their next level of ZPD by progressively increasing the level of question, can provide learners with a mindset for constructive learning (Calder, 2015). Anderson et al. (2001) summarise the constructive learning process into six learning stages, which could be an effective theoretical foundation for progressive questioning. These six stages are remembering, understanding, applying, analysing, evaluating, and creating (Anderson et al., 2001, p67-68). This inquiry-based approach to learning enables learners to learn how to construct their own learning by independently using the strategy of asking questions, analysing the questions, and then solving them step by step (Brown et. al, 2000).

Overall, most of the current research focuses on the educators' perspectives on the views and strategies of differentiated instruction. The research on how learners perceive differentiated instruction is also a valuable reference for the implementation of differentiated instruction, which is the focus of this research. Other than that, most research is currently stuck on the topic related to assisting with differentiated instruction by scaffolding support for extending the scope of what learners can do, while whether learners can mitigate the instructional challenges of the mixed-ability classroom by expanding the scope of what they can do with assistance, i.e., by enlarging their ZPD, has not been widely addressed. Therefore, the three main research questions emerged as follows:

RQ1: What are learners' attitudes towards tiered tasks?
RQ2: In what ways can TQ influence learners' attitudes towards tiered tasks?
RQ3: How can TQ be improved to better contribute to enlarging learners' ZPD?

Methodology

Philosophy Stance

Differentiation always exists in the world, but it can be given diverse meanings by the researchers with different perspectives of understanding (Junjie & Yingxin, 2022). Therefore, this research is grounded in an interpretivist research stance, aiming to focus on individual voices in the context of such a universal phenomenon (Moustakas, 1994). As objects become complex once they are associated with society, the understanding of a single object tends not to be monolithic (Saunders et al., 2012). The interpretivist stance emphasises more on the process of reconstructing understanding

(Creswell, 2007) within the context of pre-existing perceptions of commonality (Hammersley, 2013), which increases the enrichment of the data that can be referenced (AI Riyami, 2015).

Research Design

This research applied semi-structured in-depth interviews in an attempt to dig deeper into different voices to shed some new insights into the long-standing dilemma of the mixed-ability classroom. The interviews were conducted with high school students, who are at an age that is easily influenced by others' statements (Litosseliti, 2018). Compare with focus group interviews, one-on-one interviews emphasise the individual's voice to a greater extent. Focus group interviews are difficult to get a high level of participation from each interviewee and some voices might be ignored (Kitzinger, 1994), depriving the researcher of the opportunity to gain insight into individual perspectives (Morgan, 1996). Therefore, this research did not utilize the more efficient focus group interviews to ensure the depth and accuracy of the data. Besides, semi-structured in-depth interviews are more conducive for the researcher to build trust with the participants (Roller & Lavrakas, 2018), to detect the authenticity of the participants' answers through multiple perspectives, as well as to tap into the inner truth of more interviewees (Denzin & Lincoln, 2003).

Sampling

The sample for this research was selected from a Shanghai international high school with four students in the top 15 per cent of the school's overall rankings in the 2023 IGCSE exams, four students in the top 15-70 per cent of the rankings, and four students in the bottom 30 per cent of the rankings, respectively. This research adopted a quota sampling method of voluntary enrolment, whereby four students were randomly selected from the list of students in each stratum respectively for in-depth interviews of about 45-70 minutes. This sampling method partly ensured a high level of willingness to participate (Berinsky, 2006), a high level of interest (Yang & Banamah, 2014), and a more comprehensive understanding of different levels of student perspectives among the participants of this research. Although the sample may limit a certain amount of external validity (Gschwend, 2005), this research aims to examine the authentic perceptions of mixed-ability students in the same learning environment. Therefore, it is more conducive to the validity of this research to be in the same high school. This research was based on the fact that all interviewers who participated in signed an informed consent form and participants were informed that they had the right to withdraw from the research at any time during the process.

Data Collection

Data were collected with consented recording equipment to facilitate subsequent transcription. Due to the uncertainty of semi-structured one-on-one interviews, the interview time for each interviewer was controlled to be around 45-70 minutes. This period proved to be the most appropriate time for exploring the insights of each interviewer after the pilot interviews with the two high school students.

Findings

Demographic for participants

Participant first name (**pseudonym**)	Number of A's achieved	Number of B's achieved	Number of C's achieved	Number of D's achieved	Number of F's achieved
Chen	6	0	0	0	0
Julia	5	1	0	0	0
Roxie	5	0	1	0	0
Delilah	4	2	0	0	0
Frisk	4	0	0	1	1
Jovan	3	1	1	0	1
Kenneth	3		3	0	0
Orlando	2	3	1	0	0
Zack	0	1	1	1	3
William	0	0	2	1	3
Kimi	0	0	1	1	4
Jerry	0	0	0	0	6

Table 1: 2023 IGCSE Exam Results for 12 Shanghai International High School Students

As the table shows, they are categorised into three groups of students based on their IGCSE results. It is clear to see that even at the same performance level, each sample is highly representative. For example, Chen, Julia, and Delilah achieved high grades in almost all subjects, while Roxie, who mostly performed well, achieved a C in one subject. This situation also exists for intermediate level students, Frisk, Jovan both achieved A in their subjects, they also failed in their subjects, which means that this group of students have some academic ability but have extreme learning outcomes in some subjects. It is well worth listening to the voices of the students at the lower levels about the mixed-ability classroom, as Jerry did not pass in any subject, and the other students had a higher failure rate. The results of the interviews with these 12 samples were analysed, inducted and in turn answered the three research questions.

Students' Attitudes Towards Differentiated Tasks

It was surprising that the majority of the participants had negative attitudes towards the tired tasks and the reasons were different amongst the learners from each different level. Feeling abandoned by the educators is the main reason for the most complaints about tired tasks among intermediate and lower-level learners. A high proportion of learners, even at the intermediate and low levels, believe that their unimpressive academic performance is only temporary, and being assigned to do lower-level tasks makes them feel distrusted and unrecognised by the educators. This negative emotion of being publicly defined as an inferior leads to a high risk of learners' losing confidence in their learning and thus giving up on progress and endeavour. Meanwhile, teacher beliefs are motivating some high-level learners such as Chen and Roxie, and the recognition they receive from their educators greatly stimulates them to be more motivated, persistent, and active in their learning. These learners develop confidence from the tiered tasks and define themselves as gifted learners. To maintain their current affirmation of themselves, they strive harder and spend more time completing tasks at high quality and actively participating in class. Contrary to this phenomenon, Julia and Delilah, also from a high-level group, showed a different perspective, preferring to define what

tasks they should accomplish at their own pace. Rather than being recognised, they have a greater interest in witnessing progress in their own learning outcomes. Rather than being arranged, they trust their own judgement of their individual learning status as they sometimes also need to take breaks and consolidate their fundamental knowledge.

Vague tiering criteria as well as promotion systems are another major reason why tiered tasks are criticised by learners, especially for intermediate students. Orlando and Jovan, as well as Frisk, all mentioned their doubts about the tiering criteria, arguing that they shouldn't be measured only by a certain number of exams, as opposed to possibly ignoring their potential and abandoning the possibility of progress. Specifically of note, all three students emphasised that the unclear promotion mechanism gave them a lack of motivation to work hard because they were worried about wasting time as feeling uncertain to find out how hard they should work to get into a higher-level group. However, a task that requires less thinking skills may cause more boredom for some students, especially those who are less self-motivated and less interested in learning, such as Jerry, who may be more encouraged by tasks that require more thinking.

Factors Influencing How TQ Affects Learners' Attitudes Towards Tiered Tasks

Despite the learners' conflicting attitudes towards the tiered task, they all agreed that teacher questioning could greatly influence their attitudes towards the tiered task. Enhancing learners' problem-solving skills was the most frequently mentioned effect of TQ for learners' positive attitudes towards tiered tasks. Over half of the learners indicated that the primary reason for their negative attitude towards pursuing a higher-level task was attributable to their confusion of how to achieve it. Prolonged disorientation with high level tasks leads to a perception that they are not capable of doing them. However, TQ can assist students in becoming constructed learners by guiding them to break down a complex problem into a simple one and solving it step by step.

Julia stated: "TQ gives me a sense of direction in my learning, if I could know ways to learn better and do more difficult tasks, I would be more motivated to learn and would be more willing to spend time on self-study after school. "Also, William agrees, "Sometimes, I'm not good at a certain class is probably due to my lack of fundamental knowledge, but I would like to keep up with the class through my own efforts, and TQ has shown me the process of progressively learning to identify a question, ask a question, simplify the question, and solve the questions one by one. Mastering this method of learning gives me the opportunity to work hard after class, and to be able to keep up with the class on my own, I think I would be more than happy to do so."In fact, this teaching method also provides learning with fun as Chen explained that this learning process guided by TQ gave her the feeling of playing a deduction game.

Another contribution of TQ is to build students' confidence in their learning. Providing some learners with tasks that exceed their current ZPD can greatly promote learners' confidence in themselves by demonstrating the teacher's belief in them. Being given the trust of the ability to complete more difficult tasks is a powerful incentive to push learners into challenges. Especially when a learner fails to answer a question, instead of switching to others or directly announcing the answer, educators can greatly boost the learner's interest in learning by gradually guiding him to solve the problem with relatively lower level of questions. Learning is an interest-driven activity. Both Williams and Zack emphasised that the educators' follow up questions gave them a sense of

not being abandoned and a greater willingness to respond with a positive attitude towards learning. In addition, some learners mentioned that the TQ could help them concentrate better in class. Learners often fail to engage in the classroom because of low self-control, which is particularly widespread among low- and middle- level learners.

"With the fear of embarrassment of not being able to answer random questions from the educator, I can stick to the class more than I used to. Even though there are still times when I may be distracted, TQ serve as a warning to remind me to be active in the classroom." Jovan states.Overall, it is highly likely that effective TQ can involve more learners actively participating in the classroom while developing their independent thinking skills and providing them with the confidence to learn independently.

Effective Implementation Strategy for Expanding Learners' ZPD through TQ

Since TQ can stimulate learners' desire to explore their self-potential, it is a vital concern for both educators and learners in how to implement it with effective teaching methods. Class participation and constructive learning acquisition ability were identified by interviewees as the predominant pathways by which TQ could expand ZPD.

Firstly, empowering learners with confidence and courage to actively engage in the classroom is a determining factor in classroom participation. Almost all participants appreciate a relaxed, supportive class environment, providing them with more motivation to respond to the teachers' questions. Classes with equal teacher-student power relationships are more likely to encourage learners' willingness to speak as they believe their statements will be valued (Donnelly et al., 2014). "I would be more willing to answer questions if the teacher actively split the questions I could not answer into simple ones, rather than blaming me." (William)

Being in a position to express opinions and ideas without restriction is a reflection of the respect that educators show to their students. This respectful teacher-student relationship creates a relaxed classroom atmosphere and is a major contributor to the learners' participation in TQ. In a stress-free class atmosphere, appropriate follow-up questions can instead give learners the sense of being valued more than feeling pressurised. On top of that, many students are trapped by the fact that they are too lazy to think in class. Many participants indicated that positive teacher questioning can contribute to building their confidence."To prevent wasting time, most teachers will simply switch the chance to another learner when I fail to answer a question, which will make me lazier to think and lose confidence." (Orlando)

Secondly, the majority of the intermediate and high-level learners regarded cultivating their constructive learning skills as the dominant function of TQ, which assist learners to learn independently and expand their ZPD. Surprisingly, more than half respondents expressed that the traditional "easy-to-hard" TQ, i.e., from memory questions to creative questions, which is based on the learning taxonomy theory (Anderson et al., 2001), did not stimulate their active learning as much as the "hard-to-easy" TQ."I often fail to remember the most basic knowledge, but that does not mean that I would not like to be asked high-level questions, because that can provoke me to active thinking. （Jovan） "Some questions close to real life examples make me feel able to participate in the class. These types of questions are usually creation type questions and I prefer them more. " (Jerry)

Jovan and Jerry strongly expressed that a challenging question was more likely to arouse their learning interest, and it is important to note that they are relatively low-level learners. On this basis, one finding that surprised me was that a number of interviewees mentioned that this kind of reverse questioning could even guide them to develop constructed learning skills."If teacher directly ask me the challenging question, it will actually help me pinpoint where my current bottlenecks are. During the process of the teacher's constant simplification of the problem, it allows me to learn how to independently identify my problems and the path to solving them." (Roxie)"Solving problems step-by-step with the teachers' guidance can inspire me a lot to tackle problems when I learn independently." (Julia)

This finding is transformative, and it challenges educators' reliance on progressively questioning. At the same time, both Delilah and Frisk have complemented that teachers' repetitive questioning allows learners to test their learning in a timely manner as well as providing a way for learners to construct their learning.

Discussion

Based on the findings, this research found that even though tiered tasks can assist educators to personalise as many learning tasks as possible for learners within limited time, there are still more negative repercussions than positive effects amongst learners.

Difficulties in the implementation of tiered tasks are mainly due to the complexity of the learner's psychology and the complexity of the educator's assessment of the stratification. The purpose of educators implementing tiered tasks is primarily to assist different levels of learners to match suitable learning tasks to promote their self-confidence and learning motivation. However, this assumption is quite contrary to the voices of some learners. In fact, learners are also craving to be assigned tasks that are beyond their ability due to multiple factors such as peer pressure, self-esteem, and parental expectations.

This phenomenon may be attributed to the learners' perception of the learning task as a sign of their status within the class, but also to a large extent to the concern that the diminishing teacher's belief and to their self-pursuit of self, more generally. In addition to, in mixed-ability classrooms, educators sometimes tend to assign more or harder tasks to higher-level learners because if they are given tasks that are below their ZPD, it may result in a regression of their ZPD. Such tasks do motivate a large proportion of high-level learners based on their sense of self-efficacy, however, there are also learners who would prefer to be assigned the same amount of work with other levels to ensure fairness. Therefore, rather than being assigned a hierarchy of tasks by the educator, allowing learners to self-select the tasks may contribute to their learning motivation to a greater extent. In this process, educators need to be professionally trained to ensure that they properly convey the nature and purpose of tiered learning tasks to their students, and to ensure that appropriate learning tasks are designed, for example, by balancing the amount of time spent on each tier task.

As learning is an ever-changing process, teacher questioning not only supports teachers in quickly assessing students' abilities, but also helps students to conduct their own self-assessment (Patterson et al., 2009) to help them choose the most appropriate tasks for themselves. On top of that, it is a valuable teaching tool for educators to develop students' constructive learning skills. In a

mixed-ability group of students with diverse capabilities, there is a greater need to be taught a systematic process of self-learning than one-on-one scaffolding services. Teacher questioning enables learners to form the learning habit of identifying, processing, understanding, and solving questions, which dares many learners to challenge tasks that are much beyond the scope of their ZPD. Once they gain self-efficacy and enjoyment in the learning process, along with their independent learning hours, it would not take long to expand their ZPD and narrow the gap in a mixed-ability classroom.

In order to be an effective teaching tool, teacher questioning was considered necessary to guarantee logic and active student participation. Teacher questioning can indeed contribute in terms of classroom engagement by asking more realistically relevant questions to arouse students' interest in learning and help them to concentrate. However, it is a matter of concern that reverse questioning---'hard-to-easy' teaching questioning strategy seems to be more likely to stimulate learners' potential and interest than questioning strategy in accordance with the 6 stages of learning identified by Anderson et al. (2001). Learners are more likely to be attracted to a challenging, creativity-requiring task because each learner has his or her own strengths. Faced with tasks beyond their current capabilities, they may encounter some specific challenges in their problem solving, and this logical process of reverse questioning strategy helps learners to develop a constructive learning approach on how to ask questions, analyse problems and solve them.

Conclusion

In conclusion, valuing every voice is essential. Marginalised learners in the mixed ability classroom need to be valued, whilst at the same time high level students should be avoided at the expense of, and intermediate learners will also struggle with individualised needs. Therefore, as an educator, giving each student the possibility to improve his or her competence by developing the ability to construct learning is an effective way to shorten the competence gap in a mixed-ability classroom. Rather than scaffolding learners to help them increase the range of what they can do, a more long-term beneficial approach is to teach learners to construct learning in a way that expands each learner's potential, which is their ZPD.

Limitations and Future Research

This research proposes that ZPD be extended by learners through educators' guidance on learning methods combined with their own extra effort to help balance the mixed ability classroom. This is less suitable for areas where there is a particular need for the foundational competencies of past learning, such as language teaching. In addition to this, the teaching methods in this research need to be constantly adapted by the educators to the actual situation, assuming that there are learners in the class with very low self-control who do not study independently at all after class, the differentiation will instead grow and then it will be necessary to resort to the use of a combination of more differentiated teaching methods. This method of reverse questioning was analysed and evaluated based on the findings of this study, and has not been empirically investigated, so the effectiveness of the practice needs to be verified in future studies. In addition, which subjects this method is applicable to, or which types of subjects and how they are categorized all require to be further researched and discovered.

Acknowledgment

Conflict of Interest

I declare no conflict of interest.

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