

A Study on the Impact of Teaching Models Guided by the Zone of Proximal Development on the Chinese Learning Effectiveness of Junior High School Students

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Abstract. The zone of proximal development, as an important theory in the concept of educational development, has always been valued by scholars in the past. However, most studies focus on exploring teaching models such as scaffolding teaching while neglecting the role of peer cooperation etc in teaching, especially in Chinese teaching. Against this background, the study used the semi-structured interview method to conduct interviews with three Chinese teachers from different junior high schools and teaching levels, aiming to organize and summarize the commonalities and differences in the interview content, to explore the application and importance of related teaching models in Chinese teaching of junior high school and attempt to study the impact of these teaching modes on Chinese classroom and students' learning efficiency. Research found that related teaching modes have received high application and attention in Chinese teaching in junior high school, especially the structured teaching mode. However, some controversial teaching models have not reached a certain level of recognition and importance, without wide application to Chinese teaching. Overall, the application of teaching modes related to the topic still has a very positive impact on the junior high school Chinese classroom, student learning effectiveness, teacher reflection on teaching, significantly improving the atmosphere of Chinese learning and mutual assistance in the class. Students have received good feedback in homework and exams and teachers adjust teaching progress based on tracking students' learning situations.

Keywords: The zone of proximal development, teaching mode, Chinese teaching, junior high school.

1. Introduction

The zone of proximal development is a learning theory proposed by former Soviet educator Vygowski in the 1930s, which refers to the gap between students' current level and the problem-solving level they can achieve under the guidance of others.

Research on the Application of the Scaffolding Teaching Method in Primary School Chinese Classroom Teaching [1] and the generative logic, teaching models, and practical paths of deep learning [2] elaborated on the role of the scaffolding teaching method and exploratory teaching method under the guidance of the recent development zone theory in cultivating students' problem-solving ability and teacher guidance in teaching practice. Currently, a considerable amount of relevant research has fully affirmed the important role of these teaching models in student development, but there is still a significant research gap in the application of these teaching models in Chinese teaching.

The teaching models related to the zone of proximal development have not been well applied to Chinese teaching to obtain corresponding learning feedback and attention and have not been thoroughly studied by scholars, especially the peer cooperation model. Based on this, this study conducts relevant research on the application of teaching models guided by the zone of proximal development on Chinese learning in middle school and explores the impact of these teaching models on the Chinese learning effectiveness of middle school students.

This study assumes that: (1) Compared to other teaching models guided by the zone of proximal development, the application and recognition of the peer cooperation model and personalized learning mode in junior high school Chinese language classrooms are not high. (2) The application of teaching models guided by the zone of proximal development can promote teachers' teaching reflection. (3)

Teaching guided by the zone of proximal development has significantly improved students' learning effectiveness in Chinese language science in all dimensions.

2. Methods

2.1. Design

This study conducted a semi-structured interview study with 3 middle school Chinese teachers to understand the application and impact of the zone of proximal development on students' learning outcomes in middle school Chinese teaching practice. The interviewees were from three high schools in Zhongshan with different teaching levels. With the consent of the interviewees, the study used face-to-face interviews and social media interviews for recording and written recording. Because the interview research method followed the one question one answer process, the questioner could adjust the questions and conduct follow-up questions based on the interviewee's answers within the framework of the interview outline to achieve better interview research results. Therefore, this research method was chosen for research.

Based on the actual situation of this study and referenced the evaluation scales of student learning effectiveness in Types of Blended Learning Teams and Their Learning Effectiveness: A Perspective on Learning Power and Learning Efficacy [3] and Analysis of Factors Influencing Learning Effectiveness of Private Undergraduate University Students Based on Regression Analysis [4], researchers designed interview questions with three main themes and five dimensions, involving questions on the application of the four main teaching modes guided by the theory of the zone of proximal development and their impact on Chinese classrooms and student learning outcomes and so on.

2.2. Research Object

3 middle school Chinese language teachers from different teaching levels.

Mrs. Huang, a Chinese teacher from Zhongshan Overseas Chinese Secondary School, currently teaching the first grade of junior high school.

Mrs. Dong, a Chinese teacher from Sanxin Bilingual School, currently teaching the second grade of junior high school.

Mr. Xiao, a Chinese teacher from No.1 Middle School of Zhongshan, currently teaching the third grade of junior high school.

2.3. Research Process

Research design can be seen in the above content. After designing the research, interview preparation was required. Interview preparation mainly involved writing an interview outline and determining the location, time, and method of the interview. The interview outline needed to identify interview questions and themes. Due to the semi-structured nature of this interview, questions should be handled flexibly. During the interview, the researcher flexibly asked questions based on the interview outline and recorded the respondents' responses. This study used audio and text recording methods based on the choices of the respondents for preliminary recording and all content would be presented in text form in the future. During the interview process, researchers always maintained a listening and respectful attitude, encouraging respondents to freely express their opinions and experiences. After the three interviews, the researcher organized, summarized, and processed the interview recordings. After that, researchers used thematic analysis and other methods to analyze the data based on the research purpose and questions. By analyzing data, researchers could extract similar and different content from interview content and provide explanations and interpretations. Finally, the researcher would present the findings of the interview in this paper.

3. Results

3.1. The Application of Teaching Models Guided by The Tone of Proximal Development in Chinese Language Teaching

The following table 1 displays the relevant results. The teaching models guided by the zone of proximal development, such as guided instruction mode, peer cooperative learning mode, structured teaching mode, personalized learning mode, etc., have been applied to varying degrees in Chinese language classrooms in different junior high schools, especially the guided instruction mode with participation in almost the whole teaching process. The two main elements of structured teaching mode are setting goals and organizing and designing teaching activities from teacher to student. All of the Interviewees said that they would set specific targets before a new course to enable students to know what they need to learn and then preview it. For first-year students, they need more guidance to achieve these goals. But for students in grades two and three, the autonomy of learning has returned to their hands. Teachers draw out the framework of learning guidance to cultivate students' ability to customize and complete goals independently. Structured teaching mode and guided teaching mode are to some extent inseparable and commonly used, so their applications are equally extensive.

Compared with the above two teaching modes, the other two teaching modes are not so widely used and their roles have not been unanimously recognized. Mrs. Huang believed that every student is different, depending on their family and past learning experiences. She can only teach based on the approximate learning ability of the entire class instead of taking into account the acceptance ability and level of the entire class. Mrs. Dong thought that personalized teaching models such as hierarchical teaching can dampen students' enthusiasm. This is consistent with the research hypothesis that compared to other teaching models guided by the zone of proximal development, the application and recognition of the peer cooperation model and personalized learning mode in junior high school Chinese language classrooms are not high.

Table 1. Three answers of four dimensions

	Structured teaching mode	Guided instruction mode	Peer cooperative learning mode	Personalized learning mode
Mrs.Huang	√	√	√	×
Mrs.Dong	√	√	×	×
Mr.Xiao	√	√	√	√

3.2. The Impact of The Zone of Proximal Development on Chinese Language Classroom

The following table 2 displays the relevant results. The Chinese learning atmosphere in the middle school classroom and after class has been improved to some extent through the application of the teaching model guided by the zone of proximal development. Mrs. Huang said that the enthusiasm for Chinese learning in the whole class has increased while Mrs. Dong estimated that having students with good grades lead students with relatively poor grades in Chinese learning can improve the atmosphere of Chinese learning in the class. Mr. Xiao said that the atmosphere of group discussions is very intense, but it is important to note that this teaching method cannot be used multiple times in the Chinese language classroom because immersive thinking storms are not conducive to students withdrawing from the issues just discussed, reducing learning effectiveness and slow down teaching progress.

The teaching model related to the zone of proximal development can promote teachers' reflective teaching and mutual assistance among classmates. All three teachers mentioned that they will adjust teaching progress and methods based on students' performance in class and feedback on homework after class and reflect on this. Regardless of whether the peer cooperative teaching model is formally applied or not, teachers encourage students to help each other and achieve win-win results. This is roughly consistent with the research hypothesis that the application of teaching models guided by the zone of proximal development can promote teachers' teaching reflection.

Table 2. Three answers of three dimensions

	Creating an atmosphere for Chinese language learning	Promoting teacher reflection on teaching	Students help and assist each other
Mrs.Huang	√	√	√
Mrs.Dong	√	√	√
Mr.Xiao	√	√	√

3.3. The Impact of Teaching Models Guided by The Zone of Proximal Development on Students' Learning Efficiency

The following table 3 displays the relevant results. The above teaching mode has significantly improved students' learning effectiveness, personal efficacy, and collective efficacy in Chinese learning. After applying teaching methods guided by the zone of proximal development such as setting teaching objectives, providing direct learning guidance to students, interviewing students to understand the current learning situation, and adjusting teaching methods, students answered well in their subsequent assignments and exams. Good grades and praise from teachers can promote the growth of students' confidence, motivating them to be more engaged in learning Chinese and love it. When students know that hard work pays off, they would set more difficult goals and put in more effort than the previous one, breaking through themselves time and time again, thereby expanding their personal zone of proximal development, turning the unknown into the known and the difficult to achieve into achievable. Mrs. Dong also mentioned that for the class collective, when their class ranks at the top of the grade in the exam, they also develop a corresponding sense of honor and pride in the class, thereby promoting a positive atmosphere for learning Chinese in the class. This is consistent with the research hypothesis that teaching guided by the zone of proximal development has significantly improved students' learning effectiveness in Chinese language science in all dimensions.

Table 3. Three answers of three dimensions

	Promoting overall learning outcomes	Improving self-efficacy	Improving collective efficacy
Mrs.Huang	√	√	√
Mrs.Dong	√	√	√
Mr.Xiao	√	√	√

4. Discussions

4.1. Factors Influencing Learning Efficiency in The Zone of Proximal Development Teaching Method

According to evaluation scales of student learning effectiveness in Types of Blended Learning Teams and Their Learning Effectiveness: A Perspective on Learning Power and Learning Efficacy [3] and Analysis of Factors Influencing Learning Effectiveness of Private Undergraduate University Students Based on Regression Analysis [4], the learning effect is mainly reflected in the learning objectives, learning atmosphere, learning satisfaction, learning engagement and learning feedback.

Firstly, a structured teaching mode (i.e. scaffolding teaching) can adjust teaching objectives by analyzing students' learning abilities and tracking their learning situations, effectively setting and controlling students' learning objectives, enabling them to achieve the best results in Chinese language learning under the organization of the teacher and their own adaptation. Secondly, the guided teaching model can directly impart students' knowledge and experience, and observe and obtain their learning feedback during this process. Thirdly, the peer cooperative teaching model has played an extremely important positive role in promoting mutual assistance among students, creating a Chinese learning atmosphere of common progress. By promoting the generation of students' self-

efficacy and collective self-efficacy, students' enthusiasm for Chinese learning is cyclically enhanced, thereby investing more time in learning. Finally, personalized teaching mode can set different teaching objectives for students with different spans in the recent development zone, to help them achieve the best state and methods of their Chinese language learning and achieve higher scores in the exam at that level.

4.2. Challenges in Teaching Models Guided by the Zone of Proximal Development in Chinese Class

The challenges and controversies in the application of teaching models under the guidance of the zone of proximal development mainly come from the peer cooperative learning mode and personalized teaching model. However, there may also be certain problems in the application process of structured teaching model and guided teaching model.

In this study, some interviewees proposed that hierarchical teaching (i.e. personalized teaching) undermines students' learning motivation. This is indeed one of the biggest challenges. Dividing students into different classes based on external performance such as exam scores and learning behaviors can bring many negative effects, including leading to more anxiety; forming a differentiated social status for students, with high-ability level students being more popular and low-ability level students being excluded. There may even be ethnic discrimination, poverty discrimination, and other phenomena [5]. If the personalized teaching model is not used correctly, its original intention will be twisted and unable to play a true role, resulting in students who could have completed higher difficulty courses being rejected and exacerbating academic disparities; the generation of stereotypes in different classes leads to the stigmatization of middle and low-level students, reducing students' self-expectations and self-efficacy and causing a series of negative emotions and a sense of powerlessness towards learning. It is difficult for them to persist in difficult tasks, further leading to poor academic success.

In the implementation of the peer cooperative learning mode, there is a common misconception that teachers mistakenly believe that group learning is just communication among group members and that students do not need guidance from the teacher. According to such misunderstandings, teachers often randomly arrange a study group. In group learning, due to different learning abilities and methods, it is often difficult to form a consensus and communicate effectively with other members [6]. In the peer cooperative learning model, if the teacher doesn't provide specific requirements, guidance, and division of labor to the students, then constantly pays attention to the dynamics of the group during the discussion process and timely control of the field, the communication would be disordered. Group discussions need to have a correct direction, otherwise, it can easily lead to situations such as deviation and gossip that are not conducive to classroom efficiency, and the peer cooperative teaching model will lose its original role and significance, deviating from teaching objectives. The teacher's lack of control or repeated use of group discussions may lead to the phenomenon of an "immersive thinking storm" mentioned by one of the interviewees, which is not conducive to students withdrawing from it and returning to the textbooks and textbooks to objectively and rationally think about problems.

As for the structured teaching mode, due to its commonality, it has been continuously polished and perfectly integrated with Chinese language teaching. However, with the gradual standardization of teaching design, teachers are also prone to falling into mechanization and programming in their teaching, with a fixed set of patterns in their minds. No matter what the text is, as long as it is nested into relevant templates, it can be taught [7]. Under the premise of almost unchanged teaching objectives, students may find Chinese language learning very boring and feel that Chinese class is useless because they can understand the text themselves. The knowledge taught by the teacher seems to be no different from the teaching in the lower stages. From elementary school to high school, the only difference is the changes in the content of the text. When they feel that they cannot learn new things with teaching objectives that are the same, students will think that learning Chinese is meaningless.

4.3. Suggestions on Using The Zone of Proximal Development Theory to Improve Students' Learning Efficiency

The original intention of personalized teaching mode is to enable students of different zones of proximal development to achieve their best level in classes with different levels of teaching objectives. Due to the different learning levels and acceptance abilities of each student, placing students with significant differences in the same class to study is actually not conducive to their learning outcomes. Firstly, in order to protect students' self-esteem and emotions and then achieve better teaching results in hierarchical teaching, the basis and role of stratification should be explained to students and their parents before stratification. It should be clarified that this model is aimed at providing students with personalized learning experiences and finding a more suitable learning speed, learning plan, and learning atmosphere. This is a prerequisite for the application of personalized teaching mode to achieve results. Secondly, teaching objectives at all levels should be closely formulated around curriculum standards and implemented in place. For students with excellent grades, they can enhance their experience of the Chinese language subject while achieving their basic goals while for underachievers, goals can be simple but cannot be separated from exam requirements. Finally, the standard of class division should be based on individual academic performance. Classes should not be divided based on overall academic performance because some students have a bias towards subjects, it cannot dampen their motivation to excel in subject learning.

The key point of the peer cooperative teaching model is to return classroom initiative to students within the control of the teacher. Group members are people of the same age group and student identity, who can more easily understand each other's ideas and are more willing to share their own insights. Through communication, discussion, and mutual assistance among students, they can achieve a deeper understanding of the text. When implementing this teaching mode, the initial thing to pay attention to is the allocation of group members. If there is no hierarchical teaching, it is more reasonable for the entire class to allocate group members based on their proficiency in each subject. It is best to assign one or two students who are proficient in Chinese within the group, playing a leading role in classroom group discussions and improving the effectiveness of the discussion. Secondly, before conducting group discussions, the teacher needs to propose clear requirements to initiate the group discussion. Chinese is a subject with strong subjectivity, but to apply this subjectivity to homework and exams, it needs to be based on absolute objectivity. The role of textbook references and teacher guidance is to guide students towards objective and correct answers, allowing them to freely discuss after pointing out the directions. This is truly beneficial for students' learning outcomes. During the discussion process, the teacher needs to patrol the venue to grasp the discussion situation and regulate groups that are not active or overly intense.

The structured teaching model draws on the concept of Piaget's cognitivism, believing that students' learning result is achieved through the continuous balance of new and old knowledge based on assimilation and adaptation. Students are not empty-headed before entering the classroom but have their own life experience and knowledge foundation. Students in different stages of learning are like buildings in different stages of construction, equipped with completely different characteristics. As a provider of scaffolding, teachers should not adhere to the old teaching objectives, but should timely reflect on teaching and update their teaching concepts. The significance of Chinese teachers lies in filling students' original knowledge base, constructing a Chinese knowledge system for students, and presenting seemingly identical teaching content in a form that matches the learning period in the classroom.

5. Conclusion

This research has drawn the conclusions that the application of teaching models guided by the zone of proximal development in Chinese teaching in junior high school has gained certain success, having a positive impact on the learning effectiveness of junior high school students on the junior high school Chinese classroom, student learning effectiveness and teacher reflection on teaching,

significantly improving the atmosphere of Chinese learning and mutual assistance in the class. Students have received good feedback on homework and exams and teachers adjust teaching progress based on tracking students' learning situations.

Due to certain objective factors, the number of interview samples is not large enough, causing certain limitations to the data induction results. However, owing to the fact that the interviewees of this study come from a group of Chinese teachers with different teaching levels and junior high school grades, and the aim is to discover commonalities and differences in the conversation, the study has high reliability. In the future, researcher would expand the sample size and conduct more in-depth research, and discussion in order to obtain more accurate, truthful and reliable research data and conclusions.

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