



## The Effect of Problem-based Learning Combined with Scaffolding Technique on Chinese Writing Ability of 5th-Grade Students

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### Abstracts

**Background and Aims:** Chinese writing courses are an important part of primary school Chinese teaching, aiming at cultivating students' interest in writing and improving students' writing skills and expression ability. Courses are based on themes and situations that are close to students' lives and experiences. Guiding students to observe, think, and express, it helps students establish their own writing ideas and language systems, but in China, composition teaching in most colleges and primary and secondary schools has always adopted the traditional teaching mode, that is, teacher-centered, teaching book knowledge, the teaching mode is stale and boring, and the teaching method is rigid. The problems are mainly in practice is not close, and the students' practical ability is weak; Students' enthusiasm is suppressed, which is not conducive to the cultivation of innovative ability. To solve this problem researcher conducted practical research on "Problem-based learning combined with Scaffolding technique on Chinese writing ability under purposes of this study were to: 1) compare students' Chinese writing ability before and after learning through Problem-based learning combined with Scaffolding technique. 2) to compare the students' Chinese writing ability after learning through Problem-based learning combined with the Scaffolding technique with the criterion set at 70% and 3) to study students' satisfaction with learning through Problem-based learning combined with the Scaffolding technique.

**Methodology:** The effect of this problem-based learning combined with the Scaffolding technique on Chinese writing ability was verified by a one-group pretest-posttest designed experiment. The samples were 50 students from 1 Class in the 5<sup>th</sup> Grade during the 2023-2024 academic year derived from the cluster sampling method. The research instruments were as follows: 1) eight lesson plans using Problem-based learning combined with the Scaffolding technique. 2) Chinese writing ability evaluation form, with a reliability of.94, and 3) students' satisfaction questionnaire with a reliability of.88. The statistics used for data analysis were the mean, standard deviation, t-test for one sample, and t-test for dependent samples.

**Result:** After using Problem-based learning combined with the Scaffolding technique on Chinese writing ability The results of the study were as follows) the mean scores were (M=45.90, SD=3.56), were higher than before (M=31.28, SD= 2.22), with statistical significance at.01 level. ( $t_{29}=24.97^{**}: =.001$ ). 2) The Chinese writing ability of students was higher than the 70% standard, with a statistical significance at.01 level ( $t_{29}=91.21^{**}: =.001$ ). 3) Students showed the highest level of satisfaction (M=4.59, SD=0.49).

**Conclusion:** Problem-based learning combined with the Scaffolding technique on Chinese writing ability uses 6 steps:1) First, create a teaching situation to stimulate students' interest. 2) Cultivate students' independent writing ability. 3) Cultivate students' ability of cooperation and expression. 4) Timely grading and feedback to students. 5) Exercise students' ability to revise their compositions. 6) Guide students to revise their compositions and improve their Chinese writing ability. After learning management using problem-based learning combined with





the scaffolding technique students' Chinese writing ability was statistically higher than the determined criterion set of 70%. And students' satisfaction was at the highest level. Satisfaction with learning management using project-based learning was high level.

**Keywords:** Problem-based learning; Scaffolding technique; Chinese writing ability

## Introduction

According to the Ministry of Education of the People's Republic of China (2022), it is pointed out that self-directed, cooperative, and inquiry-based learning methods should be actively promoted. Students are the subjects of learning and development, hence, language courses must pay attention to students' differences and learning needs. Specifically speaking, attention must be paid to the characteristics of students' physical and mental development and language learning: protect students' curiosity and thirst for knowledge, fully stimulate students' initiative and enterprising spirit, and advocate independent, cooperative, and inquiry-based learning methods. Efforts should be made to build an open and dynamic language curriculum, and the language curriculum should be open and innovative. We should pay close attention to the development of students and changes in social reality, meet the needs of different regions, different schools, and different students as much as possible, establish curriculum goals that meet the needs of the times, develop curriculum resources that are compatible with them, form a relatively stable and flexible implementation mechanism, and constantly self-regulate and update. Adhere to the problem-oriented, comprehensively sort out the difficulties and problems of curriculum reform, clarify the focus and tasks of revision, and focus on effective responses to practical problems. Follow the law of students' physical and mental development, strengthen the integrated setting: promote the link between classes, and improve the scientific and systematic curriculum. Further, select the curriculum content that is valuable to the lifelong development of students, reduce the burden, and improve the quality. Detailed education objectives, clear implementation requirements, enhance curriculum guidance and operability." (Formulated by the Ministry of Education of the People's Republic of China, 2022)

In China, Chinese writing teaching in most colleges and primary and secondary schools has always adopted the traditional teaching mode, that is, teacher-centered, teaching book knowledge, the teaching mode is stale and boring, and the teaching method is rigid. The problems are mainly reflected in the following three points: teaching emphasizes theory, book knowledge is outdated; the combination with practice is not close, and the students' practical ability is weak; the enthusiasm of students is suppressed, which is not conducive to the cultivation of innovative ability. Many students think composition is difficult and have no interest in it. Students writing composition feel unable to start, often there will be a chaotic situation; the language accumulation is less, boring, and difficult to write concretely; Inattentive observation of one's surroundings; Lack of imagination; the subject matter is too generic to express true feelings. Some students lack basic writing skills in writing, such as how to organize the structure of the article and how to use rhetorical means, resulting in insufficient writing ability. Lack of topic selection and depth of thinking: Some students have difficulty in choosing topics in writing and cannot think deeply and analyze problems, resulting in shallow content of articles. Lack of criticism and encouragement: In the teaching process, some teachers may pay more attention to criticizing students' mistakes, and give students less positive encouragement and affirmation, resulting in students' lack of self-confidence in the writing process.

In summary, the researcher conducted practical research on "problem-based scaffolding learning



Chinese writing class" in the fifth grade of a primary school in a Chinese city. The school chosen by the author is a public primary school in Chengdu, China. Fifth grade was chosen as the experimental grade. The sample consisted of 50 students from one fifth-grade class in the 2023-2024 school year. The mean score was (M=45.90, S. D=3.56).

## Objectives

1. To compare students' Chinese writing ability before and after learning through problem-based learning with the Scaffolding technique.
2. To compare the students' Chinese writing ability after learning through problem-based learning combined with the Scaffolding technique with the criterion set at 70%.
3. To study students' satisfaction with learning through problem-based learning combined with the Scaffolding technique students.

## Literature review

In this research review literature, the researchers examined the main aspects of the current curriculum: Chinese writing course: problem-based learning, Scaffolding technique, Problem-based learning combined with Scaffolding technique, Chinese writing ability, Students' satisfaction, and other aspects of the Achievements and explanations.

### Chinese writing course

Li (2014) The author synthesizes the relevant research results at home and abroad, compares the advantages and disadvantages of different teaching modes, and puts forward a teaching mode of primary school composition course based on cooperative learning and personalized education of composition writing courses on students' writing ability in primary school. Through the review and analysis of relevant studies, the author summarizes the positive influence of the composition writing course on the improvement of students' writing ability and puts forward some suggestions for improvement and development.

Wang (2015) discusses the design and implementation of a composition teaching curriculum in primary schools. The author puts forward clear teaching objectives and content selection and introduces some effective teaching methods and evaluation methods.

Wang (2019) investigates and analyzes the present situation of composition teaching in primary schools: robes into the challenges and solutions faced by teachers in composition teaching, and puts forward some suggestions to improve the teaching effect.

In summary, the composition of primary school composition teaching curriculum mainly includes the following types:

1. Narrative writing: Narrative writing is one of the most basic and common types of writing.
2. Descriptive writing: Descriptive writing refers to a type of writing that shows details and images through the description of things, characters, and scenes.
3. Expository writing: Expository writing refers to a type of writing that explains and explains a certain thing: phenomenon, or law.
4. Argumentative writing: Argumentative writing refers to a type of writing that analyzes and demonstrates a certain point of view or issue.

### Problem-based learning

Barrows (1986) Provides a taxonomy and definition of PBL methods, including problem-driven

learning, group learning, and curriculum integration.

Savery & Duffy (1995) Introduces the teaching model and constructivist framework of PBL, emphasizing students' active participation and knowledge construction in the problem-solving process.

Barrows (1996) Provides a brief overview of the application of problem-based learning in the medical field and beyond. It introduces the origins, basic principles, and implementation methods of problem-based learning, and discusses its effects and challenges in different disciplines and fields.

Hmelo-Silver (2004) Explores what students learn and how they learn in problem-based learning. It examines learning outcomes in how students acquire and integrate knowledge, develop problem-solving strategies, and develop critical thinking and metacognitive skills.

In summary, the author believes that problem-based Learning composition teaching methods include the following contents: 1) Problem-oriented: PBL composition teaching method is problem-oriented and triggers students' thinking and inquiry. 2) Group cooperative learning: Divide students into groups for cooperative learning. 3) Independent study and research: Students conduct independent study and research according to the requirements of the problem. 4) Work creation and problem-solving: Students create works according to the requirements of the problem, such as writing papers, designing exhibition boards, and making PPTs.

In the creative process, students need to apply the knowledge and skills they have learned to solve problems. 5) Presentation and evaluation: Students present their work to the class or other groups for mutual and self-evaluation. Teachers can provide evaluation criteria and evaluation tools to evaluate and give feedback on students' work. Presentation and evaluation can help students improve their self-recognition and self-evaluation ability, and promote their learning and growth.

### **Scaffolding technique**

Bruner & Ross (1976) *Presents* the concept of scaffolding pedagogy and discusses the role of the tutor in student problem-solving.

Vygotsky (1978) The book is a classic on cultural psychology that lays out the theoretical basis for scaffolding pedagogy and emphasizes the importance of social interaction and cooperation for learning.

Rosenshine (2012) Proposes some teaching principles for scaffolding learning. The author summarized many research results and proposed some effective teaching strategies, such as clarifying teaching objectives: providing examples, and providing step-by-step guidance and feedback, to help students gradually develop their learning ability.

Rosenshine (2012) This book focuses on scaffolding teaching in the English classroom and provides practical teaching methods and guidance.

In summary, "Scaffolding teaching" proposed by Vygotsky (1967), a famous psychologist in the former Soviet Union, refers to a learner-centered teaching method based on the constructivist learning theory, aiming at cultivating students' problem-solving ability and independent learning ability. "scaffold" means Through the "scaffolding" set up by teachers, students can think actively and complete learning tasks, thus cultivating independent learning ability and constructing knowledge system. In this kind of teaching situation, students' learning potential can be better developed, and the perfect combination of "teaching" and "learning" can be realized.

### **Problem-based learning combined with the Scaffolding technique.**

Savery & Duffy (1995) Review multiple studies that explore the effects of problem-oriented learning and scaffolding techniques on student engagement. It is found that the use of problem-oriented

learning and scaffolding techniques can improve student engagement and stimulate students' interest and motivation.

Dochy et al (2003) Meta-analytical study summarizes the results of multiple studies exploring the effectiveness of problem-oriented learning versus scaffolding techniques in higher education. The results show that the use of problem-oriented learning and scaffolding technology can improve students' academic performance: problem-solving ability, and independent learning ability.

Hmelo-Silver (2004) Meta-analysis summarizes the results of multiple studies and explores the impact of problem-oriented learning and scaffolding techniques on student learning outcomes. The results show that students who use problem-oriented learning and scaffolding techniques perform better in terms of academic achievement: problem-solving, and knowledge transfer.

In summary: problem-based learning combined with scaffolding teaching means that in the process of problem-driven learning, teachers provide appropriate support and guidance for students to help them gradually master the knowledge, skills, and strategies needed to solve problems. This teaching method aims to stimulate students' interest in learning and develop their self-directed learning and problem-solving skills while ensuring that students have the necessary support and guidance in the learning process. The following are teaching strategies that combine problem-oriented learning with scaffolding techniques, they contain 4 contents: 1) Introduction of questions 2) Provide support 3) Student collaboration 4) Provide feedback and 6 teaching steps:

Step 1: Generate interest and build support.

Role of teacher: Teachers use problems or questions to stimulate students' interest, stimulate students' thinking, and support student interest.

Role of student: Students start thinking according to the teacher's questions and enter the composition study.

Step 2: Create the situation.

Role of teacher: The teacher uses pictures, videos, teaching AIDS, and questions to create the scenes involved in the composition and immerse the students in them.

Role of student: Students immerse themselves in the situation involved in the creation of the composition and recall their own experiences related to the composition.

Step 3: Independent inquiry learning.

Role of teacher: The teacher prompts the students to think, recalls the experience related to the composition, guides the students to decide on the content of the writing, and lists the writing outline.

Role of student: Students recall their experiences related to the essay, decide what to write, and make an outline on their own.

Step 4: Discuss and mutually collaborate on learning.

Role of teacher: The teacher guides the students to communicate the title of the essay, as well as the outline and the order of writing.

Role of student: Individually or in a group, students share the title, outline and order of writing, and give their opinions to classmates.

Step 5: Data Collection and Analysis.

Role of teacher: Teachers collect fragments or whole compositions written in advance, give individual guidance, and show excellent compositions.

Role of student: Students hand in the fragments or the whole essay to the teacher for



suggestions and guidance.

Step 6: Evaluate and publish results.

Role of teacher: The teacher collects all students' finished compositions, corrects them, and gives them marks and guidance.

Role of student: Students are aware of their composition scores, according to the approval and guidance, revise their composition, and get promoted.

### **Chinese writing ability**

Zhang (2016) Summarizes the research results of primary school students' Chinese writing ability, including the definition, characteristics, and teaching practice of writing ability.

Zhang (2017) Reviews the research on primary school students' Chinese writing ability, including research methods, main findings, and future research directions.

Li & Liu (2018) Review the research on pupils' Chinese writing ability in recent years, including the characteristics, influencing factors, and teaching strategies of pupils' Chinese writing ability.

In summary, the ability of primary school composition writing refers to the ability and skills displayed by primary school students in the process of writing. It includes the following aspects:

1. Chinese writing ability: primary school students should be able to write compositions in a standardized way of writing Chinese characters. They should pay attention to the standard of typeface, strokes, and handwriting so that the handwriting is clear and neat. Contains the following: 1) The title meets the requirements of the composition. 2) The topic of the article is clear and the center is clear. 3) Paragraphs are clear and properly formatted. 4) Be able to write a 350–450-word essay within the prescribed time.

2. Revision and editing ability: Primary school students should have the ability to independently revise and edit papers. They should be able to spot and correct mistakes in composition, including mistakes in grammar, spelling: punctuation, etc. Includes) Revision ability: includes the ability to fully review and revise a completed article. 2) Editing ability: It refers to the subtle correction and polishing of an article.

3. Rhetorical devices ability. Includes: metaphors: personification: parallelism, antithesis, question, rhetorical question, exaggeration, rhetorical question, analogy, and so on. These techniques are used to enhance the expression and persuasiveness of language, making the writing more vivid, vivid, and appealing. Includes: 1) Students can quote ancient poems and famous people accurately. 2) Students can use metaphor: personification: parallelism, exaggeration, and other rhetorical devices. 3) Students can describe things in beautiful sentences and express the meaning of the passage clearly.

4. Idioms ability. Idioms are fixed phrases used in a specific context and have a specific meaning and usage. Learning and mastering idioms is helpful to improve the richness and accuracy of language expression and make articles more literary charm and expressive force. Includes: 1) Students can use idioms accurately.

### **Students' satisfaction questionnaire**

Astin (1993) Discusses that when higher education is defined as a service industry, student satisfaction as a multi-dimensional concept reflects students' subjective experience and cognition of college learning experience and the value of college education.

Hartman & Schmidt (1995) Through the meta-analysis of higher education students' satisfaction, this study reveals the impact of students' satisfaction on university outcomes.

Yang (2003) Adopts the method of an anonymous questionnaire survey, takes all the college

students in 4 universities in Chongqing as the research object, and aims to study the characteristics of contemporary college students' satisfaction with their families, themselves, schools, and society, and puts forward 4 suggestions on the education and training of college students.

In summary, a student satisfaction questionnaire survey is a survey that assesses a student's satisfaction with a school or educational institution. Such surveys usually include a series of questions covering students' evaluations of teaching quality, curriculum, teachers' teaching standards, school facilities, and school management. Student satisfaction surveys are usually conducted in the form of questionnaires, which can be conducted by paper questionnaires or online questionnaires. Questions in the questionnaire usually include students' personal information, evaluation of teaching quality, evaluation of teachers' teaching level, evaluation of curriculum, evaluation of school facilities, and evaluation of school management. Students can choose the corresponding option or fill in the comments and suggestions according to their actual situation. The students' satisfaction evaluation table adopts the Likert scoring scale to evaluate students' satisfaction with 10 scaffold-based teaching items (5 marks represent complete satisfaction, 4 marks represent basic satisfaction, 3 marks represent average, 2 marks represent basic dissatisfaction, and 1 mark represents complete dissatisfaction) to measure students' satisfaction with problem learning based on scaffolding technology. The method of random sampling and questionnaire survey were used to collect data from students.

### Conceptual Framework

According to the content of this study, the independent variable of this study is problem-based learning combined with the Scaffolding technique, and the dependent variable is Chinese writing ability. Problem-based learning combined with the Scaffolding technique is positively correlated with most students' learning motivation and academic performance, and can effectively improve students' academic performance. (Bruner, 1976). In the course of Chinese writing ability, teachers will improve students' Chinese writing ability and writing performance by using the six steps of Problem-based learning combined with the Scaffolding technique. Improve students' satisfaction with the teaching process and the teaching effect of Problem-based learning with the Scaffolding technique.

#### Independent Variable Dependent Variable

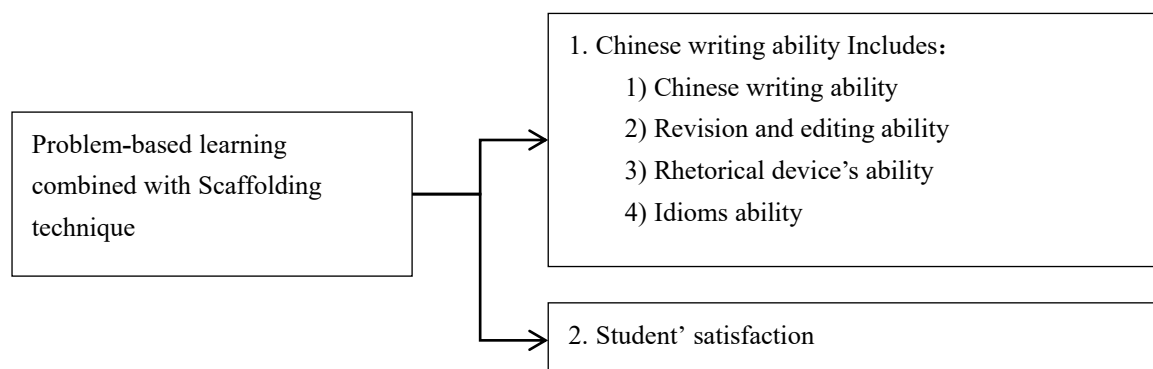


Figure 1 Conceptual Framework

## Methodology

**Population:** The population of this study was 1000 students in Grade 5 of a primary school in Chengdu, China, in the last term of the academic year 2023—2024, with 20 classes. The sample of this study was 50 students (1 classroom), in the last term of academic year 2023—2024, in Chengdu, China, derived from cluster random sampling.

### Research instruments are:

Instruments for the experiment:

- 1) Lesson plan;

Instruments for collecting data :

- 1) Chinese writing ability evaluation form;
- 2) Questionnaire for students' satisfaction with Problem-based learning with the Scaffolding technique.

The research instruments were evaluated by three Thai experts and two Chinese experts among them are Thailand's Valaya Alongkorn Rajabhat University, three experts in education, and two experts from Chinese universities, one is a psychology expert from LeShan Normal University in Sichuan, China, and one is an education expert from Xi'an University of Arts and Sciences in China. After the experts evaluated the research instruments, the researchers implemented 8 lesson plans to try out with another group of students. After the tryout and developed instruments were complete, the researchers used all instruments to collect data and evaluate the Chinese writing ability learning outcomes.

**Data collection:** The procedures of data collection were as follows:

- 1) The samples were given the measuring Chinese writing ability by evaluation form.
- 2) The samples were learning through Problem-based learning with Scaffolding technique.
- 3) After finishing the instruction, the samples received the measuring Chinese writing ability by evaluation form which was used in the before.
- 4) The samples were given the students' satisfaction questionnaire.

**Data analysis:** In this study, data were analyzed by using the statistical program according to their research objectives. 1) Compare Chinese writing ability before and after research problem-based learning combined with the Scaffolding technique by using a t-test for the dependent sample. 2) Compare Chinese writing ability with the determined criteria set at 70 percent by using a t-test for one sample. 3) Assess the students' satisfaction with problem-based learning combined with the Scaffolding technique by using arithmetic mean and standard deviation.

## Results

**Table 1** The result of comparing the different scores of Chinese writing ability before and after learning through problem-based learning combined with the Scaffolding technique.

Group	<i>n</i>	Pretest scores		Post-test scores		<i>t</i>	<i>p</i>
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Experimental group	50	31.28	2.22	45.90	3.56	24.97**	.001

\*\**p*<.01

As presented in Table 1, the Mean score of the pretest of students' Chinese writing ability was



31.28 (SD= 2.22) and the Mean score of the post-test of students' Chinese writing ability was 45.90 (SD=3.56).

The result of this table showed that after learning through problem-based learning combined with the Scaffolding technique on Chinese writing ability in the classroom: post-test scores of students' Chinese writing ability were higher than pretest scores with statistical significance at .01 level ( $t_{29} = 24.97; p = .001$ ).

2. The results of the research objective of comparing the different scores of Chinese writing ability after learning through problem-based learning combined with the Scaffolding technique with the criterion set at 70 percent are shown in Table 2.

**Table 2** The result of comparing the scores of Chinese writing ability after learning problem-based learning combined with the Scaffolding technique with the criterion set at 70 percent.

Group	n	Full score	Criteria score	M	SD	t	p
Experimental group	50	50	35	45.9	3.5	91.21*	.00

\*\* $p < .01$

As presented in Table 2, the mean scores of students' Chinese writing ability after learning problem-based learning combined with the Scaffolding technique were 45.90 from possible full marks of 50 and the standard deviation was 3.56 which was higher than the criterion set at 70% with statistical significance at .01 level ( $t_{29} = 91.21, p = .001$ ).

3. The result of students' satisfaction with the problem-based learning combined with the Scaffolding technique on Chinese writing ability is shown in Table 3.

**Table 3** The results of students' satisfaction after learning through problem-based learning combined with the Scaffolding technique on Chinese writing ability.

	ITEM	M	SD	Level of satisfaction
1	Are students satisfied with the teaching process of scaffold technology for problem learning?	4.74	.44	Very High
2	Are students satisfied that problem-based learning with scaffolding technology makes the classroom more interesting?	4.32	.62	High
3	Are students satisfied that the problem-based learning of scaffolding technology has improved their Chinese writing ability?	4.74	.44	Very High
4	Are students satisfied with the adaptability of scaffolding technology to new methods of problem-based learning?	4.74	.44	Very High
5	Are students satisfied that problem-based learning of scaffolding technology improves students' ability to cooperate?	4.74	.44	Very High



	ITEM	<i>M</i>	<i>SD</i>	Level of satisfaction
6	Are students satisfied that problem-based learning with scaffolding technology improves students' thinking skills?	4.74	.44	Very High
7	Are students satisfied that problem-based learning of scaffolding technology improves students' communicative skills?	4.06	.55	High
8	Are students satisfied that problem-based learning with scaffolding technology increases student engagement?	4.74	.44	Very High
9	Are students satisfied that problem-based learning with scaffolding technology improves students' ability to learn independently?	4.74	.44	Very High
10	Are students satisfied that problem-based learning with scaffolding technology effectively improves student essay scores?	4.32	.62	High
	<b>Total</b>	<b>4.59</b>	<b>.49</b>	<b>Very High</b>

Based on the results, we can state the following:

As shown in Table 3 and Table 4, the overall results of problem-based learning combined with the Scaffolding technique on Chinese writing ability by students are at a very high level ( $M=4.59$ ,  $SD=.49$ ). Thus, it was concluded that students' satisfaction with the students after receiving of problem-based learning combined with Scaffolding technique on Chinese writing ability was very high.

## Discussion

Students' writing ability and academic performance significantly improved after learning through Problem-based learning combined with the Scaffolding technique. The fifth-grade students in the experiment used the "Problem-based learning combined with Scaffolding technique" in the "Chinese writing ability Course" to take the pretest of academic achievements. The average pretest score of students' academic achievements was 31.28 ( $SD = 2.22$ ), and the average post-test score of students' academic achievements was 45.60 ( $SD = 3.56$ ). The statistical significance level is .01 ( $t_{29} = 24.97$ ;  $p = .001$ ). The six teaching steps of this study proved to be very effective and practical:

Step 1: Generate interest and build support. It's about building support by providing context and stimulating interest. Through the introduction of situations, and guidance they succeed in their learning process.

Step 2: Create the situation. This approach aims to promote deeper learning by encouraging students to explore alternative perspectives, consider different possibilities, and develop a more nuanced understanding of the topic.

Step 3: Independent inquiry learning. Independent exploration and self-study doubt refers to the process of students taking initiative and responsibility for their learning, experiences to deepen their understanding of a topic or concept. Improve students' ability to think and write independently.

Step 4: Discuss and mutually collaborate on learning. Such activities make our composition class more interesting, not only exercising the students' cooperation and communication ability but also conducive to mutual composition learning and improvement.

Step 5: Data Collection and Analysis. Data collection and analysis" refers to the systematic gathering and examination of information or data to uncover patterns, trends, or insights. By collecting and correcting students' compositions, teachers give students' compositions corresponding scores and evaluate students' writing levels in each class.

Step 6: Evaluate and publish the results. During the teaching period, teachers timely feedback on students' writing performance and grades to make students aware of their progress and shortcomings, to better utilize Problem-based learning and scaffolding technology to cultivate students' writing ability.

The research result shows that the use of Problem-based learning combined with the Scaffolding technique is positively correlated with most students' learning motivation and academic performance, and can effectively improve students' academic performance. (Bruner & Ross, 1976)

After the "Problem-based learning combined with Scaffolding technique " method was adopted for students' Chinese and writing ability, the scores of fifth-grade students' Chinese and writing ability were both higher than 70% standard, with statistical significance of 0.01 ( $M=45.60$ , standard deviation  $=3.56$ ,  $t_{29}=91.21$ :  $=.001$ ). The experiment has statistical significance and feasibility. This research on "Problem-based Scaffolding Learning in Chinese Writing Ability" used the Chinese writing ability evaluation form from four aspects: 1) Chinese writing ability 2) Revision and editing ability 3) Rhetorical devices ability 4) Rhetorical devices ability, from 10 items focuses on training and assessment of students. Significantly improves students' learning initiative, improves students' participation in the teaching process, stimulates students' thirst for knowledge, and activates their thinking. Students learn to gradually identify and solve problems in learning and grow as independent learners. (Vygotsky, 1978).

The course satisfaction survey is a kind of questionnaire survey, supplemented by online evaluation, to understand students' satisfaction with the course content and teaching methods. Through the survey, educational institutions can better grasp the needs and expectations of students, improve the teaching methods and content, and improve the learning effect and satisfaction of students. (Herzberg, 1959). Problem-based learning combined with the Scaffolding technique method can motivate the students' satisfaction. The score of the students' satisfaction on the learning management using Problem-based learning combined with the Scaffolding technique method was 4.06-4.74, the SD was 44-.62, the total Mean score was 4.59, and the total SD was 0.49. which was statistically significant. From the analysis of the student satisfaction table, it can be seen that the overall effect of problem-based scaffolding learning on students' Chinese writing ability is at a very high level.

## Conclusion

Through the comparative analysis of the test results before and after the course "Problem Learning Combined with Scaffolding Method to Improve Chinese Writing Ability", the conclusion is drawn that the application of problem learning and scaffolding technology in the teaching process can meet students' personalized learning needs, stimulate students' learning interest, improve students' learning efficiency and improve students' learning enthusiasm. Moreover, students' satisfaction with problem-oriented learning is Very high. Problem learning combined with the scaffolding method is feasible in the teaching of Chinese writing courses in grade five, which is helpful to improve students'

learning effect and achievement, and is welcomed by students.

## Recommendation

### 1. Recommendation for implication

Following the results, we have some suggestions:

1. Personalized bracket design. In future studies, teachers should provide targeted support according to different students' writing levels and needs, dynamically adjust the strength and type of support, and appropriately reduce or adjust the teacher's assistance with the progress of students.

2. Improve evaluation and feedback mechanisms. Since composition correction takes a long time, teachers give slow feedback to students. In the later research, teachers try their best to establish a feedback system combining student self-assessment: peer evaluation, and teacher feedback, to make the feedback of students' scores more timely, specific, and gradual, to serve the improvement of students' composition scores.

3. Transformation of the role of teachers. Teachers need to transform their role from traditional knowledge imparts to mentors and facilitators, who can adjust and optimize the scaffolding composition teaching plan at any time according to the needs and situations of students, help students effectively complete the writing tasks, make students become the subject of learning, and provide effective guidance and support.

### 2. Recommendation for further research

Problem-based learning combined with the Scaffolding technique on Chinese writing ability is a very effective teaching mode. In the future, the following directions can be further studied to improve the teaching effect of composition writing:

1. All the students in the whole grade are selected to participate in this study, and the composition teaching mode of Problem-based learning combined with the Scaffolding technique on the Chinese writing ability of the whole school and even in the whole district's grade 3-6, so that this method can truly serve the composition teaching of students.

2. Interdisciplinary integration and application design research. In future studies, teachers can combine the scaffolding composition teaching model with the cultivation of knowledge and ability in other disciplines to achieve interdisciplinary integration, allowing students to apply and transfer scaffolding writing strategies in multiple disciplinary contexts.

3. Establish a process evaluation feedback mechanism. In future research, teachers should pay attention to the performance and progress of students in the whole process of completing the scaffolding task, rather than a single result evaluation, and give timely and specific process feedback to help students adjust and improve in time.

4. Strengthen cooperation with parents and social resources. Teachers should strengthen cooperation with parents and social resources, form an educational community, jointly pay attention to students' writing education, introduce new teaching resources to enrich students' writing materials and improve their writing skills, and provide more support and help for students' Chinese writing ability training.

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