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Innovative integration of situated and collaborative learning: Enhancing third-grade students' Chinese reading comprehension and social abilities

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ABSTRACT

This study explores the integration of situated and collaborative learning to enhance third-grade students' Chinese reading comprehension and social abilities, addressing a critical gap in primary school education research. Situated learning immerses students in realistic contexts while collaborative learning emphasizes teamwork and interaction. The study introduces an innovative pedagogical approach to improve academic and social outcomes by combining these methods. A quasi-experimental design was implemented with two groups of students from a primary school in Shandong, China. The experimental group used the hybrid teaching method while the control group followed traditional instruction. Data collected through reading comprehension tests and social abilities assessments revealed significant improvements in the experimental compared to the control group with large effect sizes in both domains. These findings underscore the combined approach's effectiveness in fostering deep learning, improving communication skills, and enhancing teamwork. Practical implications highlight the method's potential to address challenges in traditional teaching by integrating real-world scenarios and collaborative tasks. The study is limited by its short-term focus and sample size, suggesting future research should examine longitudinal effects, broaden participant diversity, and evaluate its impact on other competencies such as writing skills and creativity despite its success. This study contributes to the field by demonstrating a transformative approach to primary education, bridging theoretical learning and practical application.

Contribution/ Originality: This study uniquely integrates situated and collaborative learning to enhance Chinese reading comprehension and social abilities in primary education. Unlike previous research, it combines these methods in a hybrid approach applying them specifically to third-grade Chinese language teaching and providing empirical evidence of their effectiveness in real-world classroom settings.

1. INTRODUCTION

Improving students' basic competencies, particularly in Chinese reading comprehension and social skills has become an important field of current educational study as educational reforms develop wider. Traditional language teaching methods often focus on the imparting of knowledge and the training of skills, neglecting students' application and interaction in practical situations resulting in the failure to effectively improve the learning interests and reading comprehension of some students (Dos Santos, 2020). In recent years, situated learning and collaborative learning as emerging teaching models have gradually drawn the attention of the academic community and educational practitioners (Al-Hakim, Yang, Liyanawatta, Wang, & Chen, 2022; Qureshi, Khaskheli, Qureshi,

Raza, & Yousufi, 2023; Troussas, Giannakas, Sgouropoulou, & Voyiatzis, 2023; Yan, Lowell, & Yang, 2024). These initial studies show that the method that combines situated learning and collaborative learning in comparison with the traditional teaching approach has helped us remarkably improve both students' reading comprehension and social skills. The two approaches will not only make students feel participation but also help students boost reading comprehension and social skills when they interact almost in real situations.

It is a big question to us how to build an effective teaching strategy based on the integration of these two models. The "situated learning" refers to a type of learning that occurs when the learners are immersed in real or simulated situations (Donaldson, Fore, Filippelli, & Hess, 2020). An intriguing proposition of the learning model is its consideration that the acquisition and practice of knowledge within an artificial environment or an abstract reality is altogether missing. Similarly, the learning process itself should not be based on purely theoretical concepts that are separated from real-life problems or situations. The core idea of situated learning is that "learning is participating in social practice in specific situations", that is, students obtain knowledge and skills by personally participating in a certain situation to solve practical problems. On the other hand, collaborative learning is a learning model based on group cooperation emphasizing interaction and cooperation among students. In this learning mode, students work together to solve problems and complete tasks. The learning process is not just an individual activity but promotes the construction of thinking and knowledge through cooperation with others (Herrera-Pavo, 2021). Collaborative learning not only focuses on the acquisition of knowledge but also attaches particular importance to the cultivation of students' social skills, communication abilities, and teamwork abilities in the collaborative process. Relevant studies have shown that situated learning and collaborative learning can effectively improve students' reading comprehension and social abilities. For example, Pratama, Putri, and Fitrah (2024) conducted a quasi-experimental study on eighth-grade students learning English in a junior high school in Jambi City. The study found that students based on situated learning had significantly better reading comprehension than those in the control group. Alzubi, Nazim, and Ahamad (2024) investigated the impact of a collaborative learning intervention program on the social abilities of EFL (English as a Foreign Language) students. The experimental group students who learned English using collaborative learning skills had significantly higher assessment scores in social abilities than those in the control group. Although recent studies have focused on the impact of situated learning and collaborative learning on students' reading comprehension and social abilities, few studies have combined situated learning and collaborative learning and applied them in primary school Chinese teaching, especially in terms of students' reading comprehension and social abilities in Chinese classes. Therefore, the effectiveness and feasibility of combining situated learning and collaborative learning in the primary school Chinese subject have become particularly important and filling this knowledge gap is of great significance for educational practice. The purpose of this study is to evaluate the effect of applying the two teaching methods of situated learning and collaborative learning in third-grade Chinese teaching, especially their impact on students' reading comprehension and social skills. The research hypothesis is that the teaching method combining situated learning and collaborative learning will significantly improve students' reading comprehension and social abilities compared with traditional teaching. The study employed a quasi-experimental design and randomly selected two distinct third-grade classes from the Sixth Primary School in Binzhou District, Shandong Province, China to verify this hypothesis.

The experimental group adopted the teaching method of combining situated and collaborative learning while the control group continued its conventional teaching (the outdated form) method. The diagnostic abilities of both groups were compared progressively after 20 teaching cycles by quantitive analysis of the data obtained from the reading comprehension and social skills test.

2. LITERATURE REVIEW

2.1. Situated Learning

The situated learning theory was presented by Lave and Wenger (1991) and is based on the idea that the learning process should be done through real or mirror social experiences. According to Nomura and Yuan (2019) learning is viewed as a social process by situated learning and people obtain knowledge and skills by socializing and engaging in the course of particular activities. Such a form of learning indicates that the process should be embedded in the real-life circumstances and the relation between the learning elements and the cultural context is strong. Therefore, it is not merely the dissemination of abstract concepts that fulfill it but it is achieved by the specialization of actions and exchanges in these environments in education (Eddy, Hao, Markiewicz, & Iverson, 2019).

Situated learning in language teaching has authorized working students with greater comprehension of the text because of the focus on context and practice. Studies reveal that learners of situation-oriented learning gain a better grasp on distinct language concepts by relating what they know to real-life situations which strengthen their reading comprehension through its innovative learning model. To illustrate, several methods which include role-playing and group discussion, problem-solving which can notify the interests of students and at the same time create their in-depth learning abilities of the text content can be cited (Utami, Yahrif, Rosmayanti, & Siradjuddin, 2023). Additionally, research underscores that learning tasks based on contextualized learning such as ones adapted to real surroundings or concerning real-life. For instance, reading news and storyline discussion can gain the relevant background knowledge (i.e., schemas) as well as help in the improvement in the reading efficiency (Pratama & Sumardi, 2022).

More specifically, situated learning is significant for socializing with students in the understanding of the two language phenomena which are the complex language expressions and the underlying attitudes (Baddane & Ennam, 2023). For instance, the teaching activities that take place in the context in which learners are supposed to read, cooperative reading tasks and in which they should talk about the practical relevance and the prediction tasks, do not only improve their reading abilities but also help them in thinking critically and integrating the information (Sari, 2020). On the other hand, situated learning can alter school work into an interactive conversation. On account of the communication that exists not only between teachers and students but also among students, the teaching style has the effect of making the learning atmosphere more interesting and motivating, and the interaction acts as a reason that contributes to a better retention of reading content in the long-term memory (Haerazi, Prayati, & Vikasari, 2019).

The approached learning helps learners to take part in numerous real-life experimental-oriented activities where they obtain firsthand experience and shape a comprehensive understanding of the points by intertwining language teaching and actual situations (Indrayadi, Yandri, & Kamil, 2020). This talking strategy has been proven not only to improve the language reading comprehension skills but also develop the total language proficiency and motivate students for further study of the foreign languages, and explains the creation of a more effective language-learning path.

2.2. Collaborative Learning

Collaborative learning is a student-centered teaching strategy that emphasizes working together in groups or teams and promotes individual learning and understanding through interaction, discussion, and knowledge sharing (Nerona, 2019; Yang, 2023). Its theoretical basis can be traced back to social constructivism and social interactionism. The core concepts of collaborative learning include interactivity, shared responsibility, mutual assistance, and collective problem-solving (Wang, 2009). In this learning mode, students are no longer passive recipients of knowledge but active participants in knowledge construction. The learning outcomes often reflect not only individual improvement but also the manifestation of collective wisdom.

Collaborative learning is widely regarded as an effective way to enhance students' social interaction abilities, which has been verified in numerous studies in recent years. Research shows that through collaborative learning, students have achieved significant improvements in teamwork, communication, and socialization skills. Ghavifekr (2020) found in a study on Malaysian middle school students that students were more inclined to team learning and that collaborative learning effectively promoted cooperation and interaction abilities within the team, providing students with more social opportunities and support for skill development. In university classrooms, Premo, Cavagnetto, and Davis (2018) further pointed out in their research that the interdependent collaborative learning module significantly enhanced students' participation levels in group collaboration. Although its effect on improving academic performance was limited, it reduced students' reliance on personal backgrounds and enhanced the fairness and inclusiveness of social interaction.

Furthermore, a meta-analysis further verified the significant and positive correlation between collaborative learning and social interaction skills. Collaborative learning not only performs outstandingly in direct social activities but also expands the scope of students' participation in discussions and reflections in an indirect way (Purbasari, Fajrie, Purwaningrum, & Sholikhan, 2023). Agustina's (2022) research emphasized that through collaborative learning, students showed significant progress in language communication, especially in oral expression. Meanwhile, it also reduced classroom anxiety and promoted teamwork. Finally, Isohätälä, Näykki, and Järvelä's (2020) research revealed that the socio-emotional interactions in collaborative learning can arouse students' enthusiasm for participation more than cognitive interactions. Such interactions can enhance positive emotions in social situations and then improve students' overall participation. These studies indicate that collaborative learning is not only an effective tool for improving students' academic achievements but also an important pathway for cultivating social interaction abilities. It enhances students' communication, cooperation and team adaptation abilities by providing diverse social interaction situations laying the foundation for their future development.

2.3. Reading Comprehension

Academic resources include the ability of reading comprehension and cognitive skills that will be the determinant for the success of the students in learning a language. During the primary school phase, this is more than academic scoring. It also contributes to her attributes and her school performance throughout her life. As research indicates, the key role in the development of reasoning about textual comprehension is the basic ability for students to learn new information and to analyze this new knowledge (Elleman & Oslund, 2019; Soto et al., 2019). This is an important issue of not only treating individual words and phrases but also having a full understanding of the manifest structure of the text, making inferences and evaluations of the information and mixing this knowledge with background knowledge. The situated learning model which features a largely direct relation to reality, is very powerful in guiding students to integrate the knowledge of what they have learned in class into real situations to improve the capabilities of students to understand things (Binti & Besar, 2018; Chang, Lin, & Lu, 2020). In this way, situated learning can be construed as a sort of real-world learning scenario that helps students in the application of text in the real world and brings them to making inferences, predictions and solving problems, all of which have a big influence on reading comprehension improvement.

On the other hand, task-oriented group learning not only maximally uses the learning abilities of the group students but also further displays its own advantages in improving reading comprehension. Research by Kitjaroonchai and Suppasetseree (2021) supports the insight that group cooperative learning enhances student interaction and thus the information and ideas exchange which in turn fosters a deep understanding of the text's content. During the collaborative learning process, students and their peers interact by speaking and sharing their individual interpretations of texts. They not only need to revise their possible sketchy comprehension but also have

to develop analytical and creative thinking that may help them increase their reading comprehension skills (Khairunissa, Sumarsono, & Sumarni, 2019).

Consequently, an integration of situated learning and collaborative learning allows students to occupy not just a broader space for learning. It provides students with real-world situations and peer interaction, particularly in reading comprehension training, so they may comprehend reading materials from various perspectives and successfully develop their reading skills.

2.4. Social Abilities

Social ability, or the abilities observed in individuals is the expression of skills such as understanding, communication, cooperation and conflict resolution in social interactions. It is among the core competencies that are formed during students' socialization and it seriously influences students' academic achievement, interpersonal relationships, and career development (Mendo-Lázaro, León-Del-Barco, Felipe-Castaño, Polo-Del-Río, & Iglesias-Gallego, 2018). Students' socioemotional characteristics by the time they are in primary school will not only affect their academic performance but also have a significant impact on their emotional development and the formation of peer relationships. By the time students are reaching primary school age, socioemotional traits they possess will not only determine their academic outcomes but also play a major role in their emotional development and the building of their peer relationships.

Situated learning making learning activities at hand and actively involving students in real social situations make it possible for them to bring their social skills to action in such contexts (Lave & Wenger, 1991). For instance, to get the experience of the role that students are not comfortable with and to develop communication skills, they can be assigned such activities like situation simulation and role play where they engage in social interaction. Thus, this not only refines their language and interaction qualities but also increases their social responsibility and sets them learning for teamwork (Rojas & Villafuerte, 2018). The method of instruction commonly known as collaborative learning possesses the quality of collective interaction and brings a very positive aspect of improving students' social skills. Studies show that collective learning not only leads to the development of mutual relationships among students while performing classroom activities in groups, but also to deepening understanding of group activities (Ruijuan, Srikhoa, & Jantharajit, 2023). To be precise, students use social skills such as tolerating differences, listening to others, and problem-solving together by reaching mutual consensus with their colleagues during the collaborative learning period (Herrera-Pavo, 2021; Isohätälä, Näykki, Järvelä, & Baker, 2018). Such competencies do not only allow students to cope with the social environment within and outside the classroom but also prepare them for more complex social situations in the future.

Therefore, the combination of situated learning and collaborative learning can not only enhance students' academic abilities but also provide students with abundant social interaction opportunities, helping them cultivate and improve their social abilities in cooperation and further promote their development.

3. RESEARCH METHODOLOGY

3.1. Research Design

This study adopted a quasi-experimental design of the pre-post-test control group with the significance level set at 0.05. The test subjects were administered a pretest that made an attempt to measure their initial reading extent and the extent of their social abilities in preparation for the next comparing assessment of both the experimental and control groups. During the 20 teaching days, the students in the experimental group were subjected to a hybrid teaching method that combined situated and collaborative learning while the control group adopted the traditional teaching approach. After the teaching was completed, a post-test was conducted on the two groups of students to evaluate the effectiveness of the teaching methods.

3.2. Definition of Concept

3.2.1. Reading Comprehension

In this study, reading comprehension refers to students' capabilities in understanding Chinese texts, acquiring information, analyzing, inferring, and integrating knowledge, including understanding of the main idea, details, inference, vocabulary, and expression.

3.2.2. Social Abilities

In this study, social abilities pertain to the abilities demonstrated by students in interactions such as understanding, communication, cooperation, conflict resolution, and emotional management. Both of these abilities are of crucial significance for students' development.

3.2.3. Teaching Method Based on Situated and Collaborative Learning

In this study, the teaching method that combines situated and collaborative learning has distinct features. This method focuses on embedding learning activities into real or simulated sociocultural situations, prompting students to acquire knowledge and skills when dealing with practical problems, and thus achieving a deep integration of learning and life (Nomura & Yuan, 2019). It is based on group cooperation and promotes the learning process through the interaction, discussion and knowledge sharing among students (Yang, 2023). This study integrated the teaching characteristics of situated and collaborative learning and designed a teaching model that combines these two methods. This model includes five key elements: situational introduction, knowledge explanation and situational experience, knowledge explanation and collaborative learning, presentation and evaluation, summarization and expansion. Table 1 presents the specific teaching process and task requirements.

Table 1. Instructional process and task requirements.

Teaching steps	Teaching objectives	Teacher's activities	Students' activities
Situational introduction	Attract students' attention, stimulate learning interest, and introduce new lessons naturally.	Attract students by presenting situational materials (Such as videos, stories, pictures, etc.). Guide students to observe the materials and ask questions related to the text.	Observe the situational materials, think and participate in the discussion of questions
Knowledge explanation and situational experience	Help students understand the basic content of the text and deeply experience the emotions.	Explain new words, key sentences, and paragraph structures in combination with situational materials. Organize situational experience activities (Such as role-playing, situational simulation, etc.).	Experience the charm of language and words in the situation. Participate in situational experience activities to deeply understand the content and emotions of the text.
Collaborative learning	Cultivate students' teamwork and communication skills and complete learning tasks together.	Assign collaborative learning tasks and clarify the requirements and division of labor. Patrol each group, provide guidance and help and guide the discussion and communication.	Carry out activities in groups, communicate, discuss, and cooperate with each other to complete tasks (Such as adapting a story and performing it, including being responsible for different tasks).
Presentation and evaluation	Show the results of group collaboration, promote mutual learning and reflection, and evaluate the learning effect.	Organize groups to present their results in turn (Such as performances, works display, etc.). Organize group self-evaluation, mutual evaluation, and teacher evaluation, comprehensively consider various aspects, give evaluations and suggestions, and focus on evaluating reading comprehension and social skills.	Show the results and cooperate with each other. Conduct group self-evaluation to reflect on performance, group mutual evaluation to learn from the advantages of other groups, and accept teacher evaluation and improvement.
Summarization and expansion	Sort out the knowledge system, consolidate what has been learnt, and expand reading and writing abilities.	Summarize the teaching content, review key knowledge, and emphasize the importance of situated and collaborative learning. Assign after-school expansion tasks (Such as extracurricular reading, writing exercises).	Sort out knowledge, deepen understanding and memory. Complete after-school expansion tasks and apply the learned knowledge (Such as reading extracurricular articles and writing).

3.2.4. Traditional Teaching Method

The traditional teaching method is a teacher-centered teaching model whose main purpose is to transmit knowledge. Under this model, teachers dominate the teaching process and students passively receive knowledge with limited classroom interaction, and their participation and initiative are restricted (Dole, Bloom, & Kowalske, 2016). In this study, the traditional teaching method adopted was that teachers conducted teaching based on the problems presented in the mathematics textbooks. The process of this teaching method includes problem introduction, explanation, students' practice and teachers' summary and feedback.

3.3. Research Population and Sample

In the 2024 academic year, this study conducted a cluster sampling of three third-grade classes from the Sixth Primary School in Bincheng District, Binzhou City, Shandong Province in China, totaling 81 students, systematically divided into three groups. Among these groups, two were explicitly defined as the experimental group (class A: 27 students) and the control group (class B: 28 students). The teaching method based on situated learning and collaborative learning was applied to the experimental group while the control group adhered to traditional teaching methods. The third group (class C: 26 students) was referred to as the validation group, playing a crucial role in assessing the reliability and effectiveness of the research instruments used in this study. Table 2 presents information on the number and gender of participants.

Table 2. Participant's information.

Items	Number	Number (Male)	Number (Female)
Sample size	81	37	44
Experimental group	27	14	13
Control group	28	12	16
Validation group	26	11	15

3.4. Research Hypothesis

The two research questions examined in this study are as follows:

(1) Students who underwent learning through teaching methods based on situated learning and collaborative learning exhibited higher levels of reading comprehension and social abilities compared to their performance before the intervention.

(2) When compared with students in the control group, those who were taught using methods based on situated and collaborative learning demonstrated distinct improvements in reading comprehension and social abilities.

3.5. Research Treatment

In this study, various measures were undertaken to ensure the reliability of the research results. Firstly, three classes were randomly selected from six third-grade classes as the research subjects to ensure the representativeness of the sample. Secondly, standardized training was provided to the participating evaluators to maintain consistency in assessment standards. Furthermore, to reduce the effect of individual teachers' levels and ways of teaching on the results, those teachers with similar qualifications were chosen and proper training for them was provided before the experiment started. Lastly, the same test papers and the same amount of waiting time between the two tests were used with the aim of diminishing the impact that pre-tests have on post-test results. Accordingly, a total of 20 instructional plans were realized, each being of 45 minutes duration.

3.6. Research Instruments

3.6.1. Chinese Reading Comprehension Test

The Chinese reading comprehension test is an integrated tool used for evaluating and improving different levels of reading comprehension competencies. Comprising five dimensions, this scale has four items per dimension, amounting to a total of 20 points. The detailed areas covered are as follows: (1) Main Idea Understanding: Determining students' understanding of the basic issue as well as the general idea behind the whole paragraph. (2) Detail Understanding: Analyzing the students' knowledge and their way of understanding relevant details provided in the passage. (3) Inferential Ability: Assessing students' capacity to reach a conclusion from given information in the passage. (4) Vocabulary Understanding: Evaluating students' ability to understand new words and phrases involving inferring the meaning out of context. (5) Expressive Ability: Examining the students' performance in ending, retelling, and wrapping up based on the material related to the passage.

3.6.2. Social Abilities Assessment Scale

Social abilities assessment scale is a holistic instrument that aims to comprehensively evaluate and similarly improve different facets of social abilities. This axiom has 5 components from which there are 4 items per dimension making it a total of 20 questions. It is made through a 5-point Likert scale from 1 to 5 which represents areas shown below: (1) Communication: The expression measures for the assessment of students' expressive uses, listening proficiency, and communication techniques often used during conversations with other individuals. (2) Collaboration: The students' task of role-play, coordination and the conflict resolution of teamwork will be assessed. (3) Emotional Management: Considering students' capabilities of emotional management, self-control, and self-action. (4) Politeness: The degree of politeness, regard for others and accepted etiquette upon the students' evaluation. (5) Empathy: Here, you will examine the students' reactions of understanding, sympathy, and lending a hand to other people's feelings and requirements.

3.7. Analysis of Instruments Reliability and Validity

The main purpose of the examination is to presume reliability which is accompanied by detailed test results. Because of the research findings, the practice of the instructional model based on situated learning and collaborative learning to raise not only comprehension skills in reading but also students' social capabilities is justified as the validation group (26 students) had mean scores of 69.7 and 75.5 in reading comprehension (SD = 9.15) and social ability (SD = 6.17) achievements, respectively. Additionally, Cronbach's alpha and KMO tests were employed to verify the reliability and validity of the scale used to measure these skills. The findings showed Cronbach's alpha coefficients of 0.852 and 0.875 and KMO values of 0.821 and 0.785 for the scale indicating satisfactory internal consistency and validity. Table 3 presents Cronbach's alpha coefficient and KMO test and Bartlett test.

Table 3. Cronbach's α coefficient and KMO test and Bartlett test.

Scales	Number of items		Cronbach's alpha coefficient	
Reading comprehension Assessment scale	20		0.852	
Social abilities assessment scale	20		0.875	
Scale	KMO	df	Bartlett test of sphericity	P
Reading comprehension Assessment scale	0.821	190	248.922	0.000***
Social abilities assessment scale	0.785	190	230.981	0.000***

Note: A P-value of 0.000*** indicates that the result has a statistically significant difference at a very high confidence level. KMO (Kaiser-Meyer-Olkin) is a statistic used to measure whether the data is suitable for factor analysis. It is used to evaluate the partial correlation between variables to determine whether the data is suitable for factor analysis or other related analyses.

3.8. Homogeneity Test

The initial analysis of the pre-test data for reading comprehension and social ability indicates no significant differences between the experimental and the control groups (see Table 4). For reading comprehension, the mean score for the experimental group was 69.26 (SD = 10.80) while the control group had a mean score of 68.57 (SD = 9.70). The t-test results (t = 0.25, df = 54, p = 0.81) confirm that the difference between these groups is not statistically significant. Similarly, in terms of social ability, the experimental group had a mean score of 75.1 (SD = 6.59) compared to 76 (SD = 6.73) for the control group. The t-test results (t = 0.50, df = 54, p = 0.62) also indicate no significant difference. Thus, the data demonstrate that both groups were at comparable levels in reading comprehension and social ability before the intervention as no significant initial differences were found.

Table 4. Comparison of pre-test.

Item classification	Groups	M	SD	t	df	p
Reading comprehension	Experimental group	69.26 points	10.80	0.25	54	0.81
	Control group	68.57 points	9.70			
Social ability	Experimental group	75.1 points	6.59	0.50	54	0.62
	Control group	76 points	6.73			

3.9. Data Collection

In this study, we will assess students' reading comprehension and social abilities using the Chinese reading comprehension ability test and the social skills assessment scale after the first and final teaching intervention plans.

3.10. Data Analysis

In this study, paired-sample t-tests are used to analyze the scores of reading comprehension and social abilities of the experimental group students, thus testing the first hypothesis: "Students who underwent learning through teaching methods based on situated and collaborative learning exhibited higher levels of reading comprehension and social abilities compared to their performance before the intervention".

Independent-sample t-tests are employed to analyze the scores of reading comprehension and social abilities between the experimental and control groups, thereby testing the second hypothesis: "When compared with students in the control group, those who were taught using methods based on situated and collaborative learning demonstrated distinct improvements in reading comprehension and social abilities".

3.11. Ethical Affirmation

All research activities of the research project "Innovative integration of situated and collaborative learning: Enhancing third- grade students' Chinese reading comprehension and social abilities" strictly adhered to ethical requirements and had been approved by the research ethics committee of Nakhon Phanom University in Thailand. The project approval number is HE16767.

4. RESULTS

4.1. Hypothesis 1 Test

Students who underwent learning through teaching methods based on situated learning and collaborative learning exhibited higher levels of reading comprehension and social abilities compared to their performance before the intervention. Table 5 presents a comparison of pre- and post-tests in the experiment group.

Table 5. Comparison of pre- and post-tests in the experiment group.

Students' scores in different tests	M	SD	t	df	p	Cohen's d
Pre-test of reading comprehension	69.26 points	6.77	-18.13	26	0.000*	3.49
Post-test of reading comprehension	84.82 points	5.74				
Pre-test of social abilities	75.11 points	3.98	-26.23	26	0.000*	5.05
Post-test of social abilities	85.52 points	3.03				

Note: *P<0.05.

The analysis of reading comprehension scores in the experimental group showed significant improvements following the intervention. Before the situated and collaborative learning methods were applied, the mean score for reading comprehension was 69.26, with a standard deviation of 6.77. After the intervention, the mean score increased notably to 84.82, with a reduced standard deviation of 5.74. A paired sample t-test revealed that this change was statistically significant ($t = -18.13$, $df = 26$, $p < 0.000$*), with an effect size (Cohen's d) of 3.49, indicating a very large effect. This result underscores that the teaching strategies had a substantial impact on enhancing students' reading comprehension skills.

Similarly, the social abilities of students in the experimental group also improved significantly post-intervention. The pre-test mean score for social abilities was 75.11, with a standard deviation of 3.98, while the post-test mean increased to 85.52, with a reduced standard deviation of 3.03. The paired sample t-test demonstrated a highly significant increase ($t = -26.23$, $df = 26$, $p < 0.000$*) with an even larger effect size (Cohen's d) of 5.05. This result highlights the strong influence of situated and collaborative learning on enhancing students' social skills.

4.2. Hypothesis 2 Test

When compared with students in the control group, those who were taught using methods based on situated learning and collaborative learning demonstrated distinct improvements in reading comprehension and social abilities Table 6 presents comparison of post-test.

Table 6. Comparison of post-test.

Item classification	Groups	M	SD	t	df	p	Cohen's d
Reading comprehension	Experimental group	84.82	8.14	4.73	54	0.000*	1.28
	Control group	73.57	9.41				
Social abilities	Experimental group	85.52	5.07	4.26	54	0.000*	1.15
	Control group	79	6.21				

Note: *P<0.05.

Students in the experimental group achieved a mean score of 84.82 with a standard deviation (SD) of 8.14 in the post-test for reading comprehension. In contrast, the control group which did not receive the situated and collaborative learning intervention had a mean score of 73.57 and an SD of 9.41. A t-test for independent samples revealed that this difference was statistically significant ($t = 4.73$, $df = 54$, $p < 0.000$*) with Cohen's d indicating an effect size of 1.28. This effect size is considered large demonstrating that the teaching methods had a substantial impact on improving reading comprehension among students in the experimental group when compared to those in the control group.

Therefore, post-test results of social ability scores (not pooled) also showed significant differences between the two groups. The experimental group outscored the control group by a large margin of 85.52% (SD = 5.07) as against the 79% (SD = 6.21) control group's score. The t-test for independent samples revealed a statistically significant difference ($t = 4.26$, $p = 0.000$). The effect size is a large effect indubitably expressed in Cohen's d as 1.15. Therefore, guided coordination and collaboration learning arrangements were significantly responsible (in a

positive way) for creating social skills among students involved in these teaching sessions as opposed to the students who were not engaged.

5. DISCUSSION

This study sought to evaluate the value of combining situate and collaborative learning in teaching third-grade Chinese language. Our research revealed that this dual approach accelerates students' reading comprehension and social skills when compared to traditional teaching methods significantly. The experimental group showed extreme gains in social skills and reading comprehension to the extent that they were taught using the contextual and collaborative learning strategy. The mean score from the pre-test and post-test comparison of the experimental group yielded significant differences with large effect sizes for both areas of study. The experimental group demonstrated gains in social skills and reading comprehension to the extent that they were taught using the contextual and collaborative learning strategy.

The positive results of learning by approach on reading comprehension are like past research Pratama and Sumardi (2022) and Utami et al. (2023). These studies found that contextualizing learning facilitates students' comprehension of what they are reading. But this research moves further by introducing the method of learning in the situation with collaborative learning, a teaching strategy not much used in primary Chinese language education. According to prior investigations, collaborative learning is also found to develop social skills (Ghavifekr, 2020; Premo et al., 2018). This research outcome not only conforms to such an integrative perspective but also boosts the existing dataset by evidencing that social ability is developed in a synergistic manner with the mix of collaboratively situated learning as a result of finding people to interact and work with in a real setting.

As a result, teachers should take several factors into consideration when preparing an education that is situated and collaborative. Situating the design of learning experiences in real work problems involves aligning the learning activities with the curriculum and the learner's objectives. The scenarios and tasks must be relevant to students and create enough interest in their life and experience (Jackson, Fleming, & Rowe, 2019; Shin, 2018) which is critical for the transfer of knowledge. Next in line is the factor of grouping in collaborative learning interactions which plays a significant role. Teachers should look for heterogamous groups since they are diverse and have different points of view that enrich the learning experience. Guidelines for teamwork should be provided in the form that guarantees effective communication and a common goal; everybody should share responsibility (Cañabate et al., 2021; Klang et al., 2020). Furthermore, the teaching element provides an indispensable contribution which is decisive in the learning opportunities given to the learners. We must make sure that students' learning is scaffolded, timely, and properly guided so that all activities will be beneficial and purposeful (Lin, Hou, & Chang, 2022).

Among the most notable ones, this research was done. The sample was selected only from one school in one area whose characteristics may not be reflected in the population as a whole. Future research can include more schools and different locations to generalize the findings and increase the external validity of the results. This study was limited to overtime effects; a longitudinal study can provide this knowledge regarding the long-term effects of integrated situated and collaborative learning as well. Finally, future studies might examine the consequences of other issues such as writing skills, creativity, and self-regulated learning while the study explored reading comprehension and social affairs.

6. CONCLUSION

This study revealed that using learning through the situated context and collaborative work intensified the reading skills and social abilities of third-graders in Chinese. The combination of different teaching methods surpassed the traditionally used teaching methods in effectiveness which was clear from the high number of improvements among the experimental group. Furthermore, future studies can also invite more participants and

evaluate the long-term effects and other learning gains to ensure the confirmation and the view optimization of the instructional method.

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