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Effect of Kinesthetic Learning Strategies on Promoting Chinese Traditional Culture Literacy of Fifth-Grade Students

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Abstract

Background and Aims: In recent years, primary school Chinese language classrooms across the country have exhibited issues such as monotonous teaching methods and low student engagement in traditional culture education. Classical Chinese reading classes remain largely teacher-centered, emphasizing content explanation over active engagement, which may limit students' participation and motivation to learn. This study employs a kinesthetic learning strategy teaching model to transform traditional Chinese language education methods, thereby enhancing elementary students' traditional cultural literacy. The purposes of this study were 1) to compare the Chinese traditional culture literacy of primary students before and after learning through kinesthetic learning strategies, 2) to compare the Chinese traditional culture literacy of primary students who learned through kinesthetic learning strategies with the predetermined criterion of 70 percent, and 3) to compare students' satisfaction after learning through kinesthetic learning strategies with the predetermined criterion of 70 percent.

Methodology: This experimental study included 40 fifth-grade students (1 classroom) at Tian Xin Primary School in China in the 2025 school year, selected using cluster random sampling. This study used the Chinese Traditional Culture Literacy evaluation form to evaluate the students' Chinese Traditional Culture Literacy before and after learning. Data were collected and analyzed using the arithmetic mean, standard deviation, and paired-samples t-test for one sample.

Results: It was found that 1) students' Chinese traditional cultural literacy scores after learning through the kinesthetic learning strategies (M=280.64, SD=11.81) were higher than before learning through the kinesthetic learning strategies (M=240.41, SD=12.65) at the .01 level of statistical significance ($t_{39} = 23.35$, $p < .01$). 2) Students' Chinese traditional cultural literacy after learning through the kinesthetic learning strategies was statistically higher than the determined criterion of 70% at the .01 level of statistical significance (M=280.64, SD=11.81, $t_{39} = 14.95$, $p < .01$). 3)

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Students' satisfaction after learning through kinesthetic learning strategies was greater than the determined criterion of 70% at a .01 statistical significance level. (M = 4.57, S.D. = 0.49, t39=14.93, p< .01).

Conclusion: The findings demonstrate that kinesthetic learning strategies significantly improve primary school students' Chinese traditional cultural literacy and enhance their learning engagement and satisfaction. The study suggests that incorporating kinesthetic learning approaches into Chinese language instruction may provide an effective pedagogical strategy for promoting traditional culture education in primary schools.

Keywords: Chinese Traditional Culture Literacy; Kinesthetic Learning Strategies; Satisfaction

Introduction

Culture is a historically accumulated system of values, beliefs, and practices that shapes collective identity and social continuity within a society (Kafadar, 2021). Chinese traditional culture, with a history of more than 5,000 years, represents the spiritual heritage of the Chinese nation and forms an important foundation for national cultural confidence and identity (Ministry of Education of the People's Republic of China [MOE], 2022). In contemporary China, the inheritance of traditional culture has become an important educational priority. National policy documents stress that traditional culture should not only be preserved but also revitalized through creative transformation and innovative educational practices (Central Office of the Communist Party of China & General Office of the State Council, 2017).

Within the compulsory education system, Chinese language education serves as a major channel for transmitting traditional cultural knowledge and values. The *Compulsory Education Chinese Language Curriculum Standards (2022 Edition)* identify Chinese traditional culture as a key thematic component and encourage the integration of cultural inheritance with innovative pedagogical approaches (MOE, 2022). Chinese language classrooms, therefore, carry the dual responsibility of teaching linguistic knowledge while fostering students' cultural literacy, identity, and appreciation of traditional culture.

Despite these policy expectations, traditional culture education in primary Chinese language classrooms continues to face several instructional challenges. Classroom teaching still relies heavily on teacher explanation, textbook interpretation, and memorization of classical texts, which often leads to limited student participation and only superficial understanding of cultural concepts (Huang et al., 2024). Empirical investigations also indicate that many primary school students possess fragmented knowledge of traditional cultural elements such as festivals,

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calligraphy, and classical poetry, suggesting weaknesses in both instructional effectiveness and learning engagement.

Student engagement and learning satisfaction remain key concerns. Primary school students often approach traditional culture learning through short-term memorization rather than sustained understanding or cultural identification (Luo et al., 2024). The linguistic complexity of classical Chinese texts and the abstract nature of many cultural concepts can create cognitive barriers for young learners (Yao et al., 2022; Ning, 2023). When learning activities are disconnected from students' daily experiences, learners may experience anxiety, reduced motivation, and limited conceptual understanding. From the perspective of educational psychology, insufficient emotional engagement may weaken intrinsic motivation and hinder deep learning and long-term memory formation (Ryan & Deci, 2020).

These difficulties are particularly visible among upper primary school students, such as those in Grade 5, who are undergoing important cognitive and value development. At this stage, students begin to form more complex cultural understanding and identity awareness, yet they still depend heavily on concrete experiences and interactive learning environments. Traditional lecture-based instruction may therefore fail to fully support their developmental characteristics and learning needs (Zheng, 2024). Instructional strategies that provide more experiential and participatory learning opportunities may better meet these developmental demands.

Kinesthetic learning strategies offer one possible approach. Kinesthetic learning emphasizes bodily movement, hands-on activities, and multisensory engagement, drawing on the VAK learning style framework (Fleming & Mills, 1992) and experiential learning theory (Kolb, 2015). Activities such as role-playing, dramatization, cultural simulations, and craft-making can help transform abstract cultural knowledge into concrete learning experiences and strengthen students' emotional connections with cultural content (Bruun & Christiansen, 2016).

Movement-based learning has also been associated with improved memory retention, conceptual understanding, and learning engagement among primary school students (Petrigna et al., 2022). Such approaches are consistent with current curriculum reform efforts that promote student-centered, inquiry-based, and experiential learning environments aimed at cultivating cultural literacy and holistic student development (MOE, 2022). Nevertheless, systematic empirical research on the integration of kinesthetic learning strategies into Chinese traditional culture teaching in primary Chinese language classrooms remains limited.

This study, therefore, explores the integration of kinesthetic learning strategies into the teaching of Chinese traditional culture in primary Chinese language classrooms. The study examines whether kinesthetic learning can enhance students' Chinese traditional culture literacy and improve their learning engagement. The findings aim to provide empirical evidence that may

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inform instructional design and support more effective traditional culture education in primary schools.

Research Question

1) Is there a significant difference in students' Chinese traditional culture literacy before and after learning through kinesthetic learning strategies?

2) Is the students' posttest Chinese traditional culture literacy significantly higher than the predetermined criterion of 70%?

3) Is students' satisfaction with kinesthetic learning strategies significantly higher than the predetermined criterion of 70%?

Research Objective

1) To examine whether there is a significant difference in primary school students' Chinese traditional culture literacy before and after learning through kinesthetic learning strategies.

2) To determine whether primary school students' Chinese traditional culture literacy after learning through kinesthetic learning strategies is significantly higher than the predetermined criterion of 70 percent of the full score.

3) To determine whether students' satisfaction with the kinesthetic learning strategies is significantly higher than the predetermined criterion of 70 percent of the full score.

Research Hypotheses

1) Students' Chinese traditional culture literacy after learning through kinesthetic learning strategies is significantly higher than before learning.

2) Students' Chinese traditional culture literacy after the intervention is significantly higher than the predetermined criterion of 70 percent of the full score.

3) Students' satisfaction with kinesthetic learning strategies is significantly higher than the predetermined criterion of 70 percent of the full score.

Literature Review

Kinesthetic learning strategies

In this study, Kinesthetic learning strategies were synthesized based on reviewing Kolb (2015), Dewey (1933), and Hunter (1982) teaching steps of collaborative learning strategies as follows:

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Table 1 Steps of teaching Kinesthetic learning strategies

Kolb (2015)	Dewey (1933)	Hunter (1982)	The result of synthesis
Step 1: Concrete Experience. The learner fully engages and participates in a novel experience. This may be a hands-on activity, a simulation game, a field trip, or any direct, concrete encounter. This marks the starting point of kinesthetic learning strategies.	Step 1: Suggestion. Within a genuine, uncertain context, learners encounter a perplexity, dilemma, or challenge. The teacher's task is to create situations that provoke authentic problems.	Step 1: Anticipation. Stimulate learners' interest and activate prior knowledge through questioning, displaying objects, or posing a puzzle.	1. Stimulating interest and kinesthetic experience introduction.
Step 2: Reflective Observation. The learner reviews their experience from multiple angles, observing and reflecting on 'What happened?', 'How did it feel?', 'Where did things go wrong?' The teacher guides reflection through questioning.	Step 2: Conceptualisation. Transforming vague, intuitive perplexities into a clear, definable problem requiring resolution.	Step 2: Objectives and Purpose. Clearly communicate what students will learn in the lesson.	2. Knowledge Construction and Kinesthetic Engagement

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Kolb (2015)	Dewey (1933)	Hunter (1982)	The result of synthesis
Step 3: Abstract Conceptualisation. Learners synthesise their observations into logical theories, principles, or models, forming abstract conclusions. They consider: 'What does this signify?' 'What general patterns can be derived?	Step 3: Guiding Hypothesis. Learners formulate one or more conceivable solutions or approaches to the problem through observation and existing knowledge. This equates to developing a testable hypothesis.	Step 3: Input and Modelling. The teacher presents new information, demonstrating skills or thought processes through demonstration and "thinking aloud". This "modelling" itself constitutes a visualised action sequence.	3. Reflection and Consolidation (Reflect / Consolidate)
Step 4: Active Experimentation. Learners apply these newly formed theories in practice, planning subsequent steps and testing their validity in novel contexts. This constitutes a fresh 'concrete experience,' thereby initiating a new cycle.	Step 4: Reasoning. Mentally simulating the potential outcomes of implementing this hypothesis. Step	Step 4: Checking Understanding. This is a critical step. Before allowing independent practice, the teacher verifies students' initial comprehension through multiple methods. One highly effective approach is the 'Whole Body Response Method', such as: 'Please use your body to indicate which angle is acute' or 'Please move to the side of what you believe is the correct answer'. This provides immediate feedback and engagement opportunities for kinesthetic learners.	4. Application and Extension.
	Step 5: Testing through action. This is the crucial action step. Learners verify which hypothesis genuinely	Step 5: Guided Practice and Independent Practice. Students practise new skills under close teacher guidance and feedback. This may	5. Assessment and Feedback.

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Kolb (2015)	Dewey (1933)	Hunter (1982)	The result of synthesis
	resolves the problem through practical actions—conducting experiments, field operations, model building, etc. Knowledge is validated and consolidated in the process of 'doing'.	include group collaboration, hands-on experiments, or role-play simulations. Students apply acquired knowledge and skills to complete tasks autonomously, achieving automaticity.	

Based on the literature review of kinesthetic learning strategies, the results of kinesthetic learning strategies in this study comprise 5 teaching steps as follows:

1. Sparking Interest and Kinesthetic Experience Introduction

Primary Teaching Activities: Creating authentic scenarios, inducing confusion, hands-on experimentation, and simulated operations.

From Kolb: Step 1 "Concrete Experience". From Problem Solving Cycle: Step 1 "Scenario Prompt".

2. Knowledge Construction and Kinesthetic Engagement

Primary Teaching Activities: Teacher demonstration and input; students comprehend knowledge through physical movements and operational practice; Combining collaborative inquiry with physical expression.

From the Active Demonstration Method: Step 3 "Input and Demonstration." From Kolb: Early engagement in Step 2 "Reflective Observation." From the Problem-Solving Cycle: Step 2 "Conceptualization," Step 3 "Guiding Hypothesis."

3. Reflection and Consolidation

Primary Instructional Activities: Verifying understanding through questioning, discussion, and physical feedback actions to form preliminary abstract concepts. From Kolb: Step 2 "Reflective Observation" and Step 3 "Abstract Conceptualization".

From Demonstration Method: Step 4 "Understanding Verification".

4. Application and Extension

Transfer new knowledge to authentic tasks, testing theories, and extending learning through actions, performances, and operations.

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From Kolb: Step 4 “Active Experimentation”. From the Problem Solving Cycle: Step 4 “Reasoning” and Step 5 “Action Verification”. From the Demonstration Method: Step 5 “Guided Practice and Independent Application”.

5. Assessment and Feedback

Primary teaching actions: Kinesthetic assessment, peer evaluation, and teacher immediate feedback.

From the Demonstration Method: Step 5 outcome verification. Corresponds to Kolb's cycle closure mechanism.

The aforementioned model integrates Kolb's experiential learning cycle (concrete experience ⟶ reflective observation ⟶ abstract conceptualization ⟶ active experimentation), problem-solving learning steps (contextual cues ⟶ problem definition ⟶ hypothesis ⟶ reasoning ⟶ practical verification), and the direct instructional demonstration model (input demonstration ⟶ comprehension assessment ⟶ independent practice). The integration principle adheres to the core characteristics of kinesthetic learning, establishing a spiral cycle where action experience, reflective understanding, and knowledge transfer are intertwined. This is achieved by consistently centering the learner's “physical engagement in knowledge construction” as the guiding thread.

The kinesthetic learning teaching process adopted in this study comprises five stages: interest stimulation and kinesthetic experience introduction, knowledge construction and kinesthetic participation, reflection and consolidation, application and extension, and assessment and feedback. This process integrates the cyclical logic of experiential learning with the practicality of problem-solving and demonstration-based instruction, emphasizing students' knowledge internalization and transfer through physical engagement.

Step 1: Stimulating interest and kinesthetic experience introduction: Enabling students to directly engage with the learning context through physical movements or tangible experiences. Teachers employ classical poetry songs, role-playing with idiom stories, and festive cultural activities to immerse pupils in traditional cultural contexts.

Step 2: Knowledge Construction and Kinesthetic Engagement: Core Concept: Students actively construct knowledge through practice, enhancing understanding via physical movement. Students use physical “modelling” to express artistic conception, performing idiom stories in small groups to memorise plots through movement. They engage in simulated festive activities to learn cultural significance.

Step 3: Reflection and Consolidation (Reflect / Consolidate): Core Concept: Students review their practical experiences, synthesise knowledge, and develop understanding. Have students

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recount or act out their recent experience, explaining the cultural significance behind the movements verbally. Create illustrated cards combining gestures with accompanying text. Group discussion: Which movements best convey poetic imagery? Why? Deepen understanding through shared insights.

Step 4: Application and Extension: Core Concept: Students apply kinesthetic experiences and knowledge to new contexts, enhancing their ability to transfer learning. Apply and demonstrate acquired knowledge through poetic performances, cultural experiences, and interdisciplinary extensions.

Step 5: Assessment and Feedback: Evaluate learning outcomes through observation, practical exercises, or demonstrations, and promptly adjust teaching accordingly. Assessing movement performances involves observing whether pupils can accurately convey poetic imagery or idiomatic meanings through physical expression. Collect cultural project submissions to evaluate outcomes of festive experiential activities. Employ peer assessment and self-reflection: pupils evaluate each other's movement accuracy and creativity, recording learning reflections. Comprehensive evaluation of learning outcomes is achieved through movement performance, project display, and oral presentation.

Chinese Traditional Culture Literacy

Chinese traditional culture literacy refers to the comprehensive cultural competence that students develop through learning and engaging with traditional Chinese culture in the Chinese language curriculum. It involves students' understanding of traditional cultural knowledge, recognition of cultural values, and the ability to apply cultural understanding in practice. Within the context of Chinese language education, this literacy is gradually formed through exposure to classical texts, cultural practices, and meaningful learning experiences.

According to the Ministry of Education of the People's Republic of China (MOE, 2022), traditional cultural education aims to enable students to acquire knowledge of Chinese culture, understand the spirit of the Chinese nation, and practice the principle of the unity of knowledge and action. Similarly, studies have emphasized that traditional cultural literacy should be cultivated through activities such as the recitation and study of traditional classics, engagement with traditional ethical values, and participation in ritualized and everyday cultural practices. These perspectives suggest that traditional cultural literacy encompasses not only knowledge acquisition but also cultural experience, emotional identification, and value formation.

From a theoretical perspective, cultural literacy has been described as comprising multiple interrelated dimensions, including cognitive understanding, emotional identification, ethical awareness, and value beliefs (Sun, 2013). In addition, Chinese traditional culture education has been shown to promote linguistic competence, cognitive development, aesthetic appreciation,

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and cultural refinement (Chen & Yang, 2023). These theoretical perspectives indicate that traditional cultural literacy integrates knowledge, cultural identity, emotional engagement, and practical application.

Based on these theoretical foundations and the objectives of Chinese language education, Chinese traditional culture literacy in this study is conceptualized as a multidimensional construct that includes students' cultural knowledge, value identification, emotional engagement, behavioural practice, and higher-order thinking related to traditional culture. Accordingly, five components were used to operationalize this construct in the present research.

1. Systematic Knowledge and Cognitive Framework refers to the encompassing mastery of fundamental knowledge, core concepts, and historical context within traditional Chinese culture, which can be evaluated by a test paper.

2. Internalized Values and Spiritual Affinity refers to the recognition and internalization of the ideological concepts, ethical norms, and humanistic spirit embedded within traditional culture, thereby fostering robust cultural confidence and values that can be evaluated by Likert's scale.

3. Conscious Behaviour and Practical Competence refers to the externalization of internal knowledge and values through concrete actions, etiquette, and activities, thereby achieving unity of knowledge and practice, which can be evaluated by performance evaluation.

4. Integrated Thinking and Transfer Abilities refers to the capacity to apply traditional cultural wisdom in observing, analyzing, and resolving contemporary issues, which can be evaluated by a scoring rubric.

5. Ongoing Emotional Engagement and Internalization Process refers to its formation as a continuously internalized and evolving process influenced by multiple factors, rather than a static outcome, which can be evaluated by a Likert scale.

Conceptual Framework

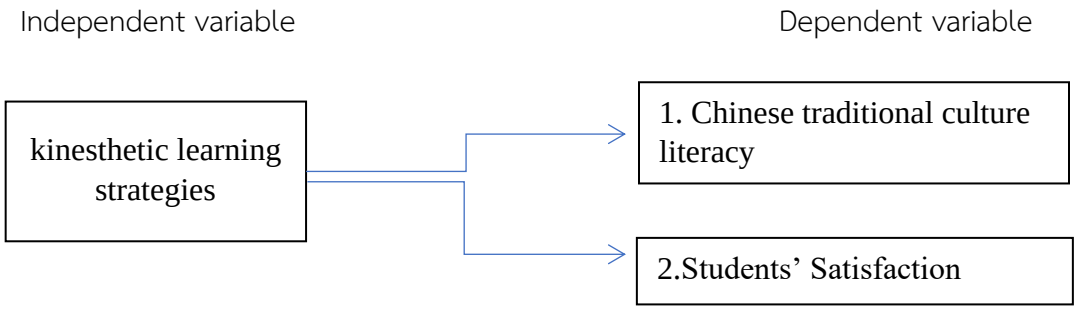


Figure 1 Conceptual Framework

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Methodology

Population and Sample: The population of this study consisted of 400 fifth-grade students from ten classrooms at Tianxin Ethnic School in Yunnan Province, People's Republic of China. To obtain the study sample, cluster random sampling was employed. Each classroom was treated as a natural cluster. Among the ten fifth-grade classrooms, one classroom was randomly selected to participate in the study.

The selected class included 40 students, who constituted the sample for this research. All students in the selected classroom participated in the learning activities and data collection procedures of the study.

Experimental Design:

This study was conducted through a One-Group Pretest–Posttest Design, as shown in the figure below:

Group	Pretest	Treatment	Posttest
Experimental	O_1	X_1	O_2

O_1 was a measurement of Chinese traditional cultural literacy before an experiment.

X_1 was the implementation of using kinesthetic learning strategies

O_2 was a measurement of Chinese traditional cultural literacy and students' satisfaction after an experiment

Research Instruments: Research instruments were the tools for researching to collect data. The research instruments that were used in this study were:

1. Instruments for Experiment

Lesson plans: There were 12 lesson plans allocated with 12 hours of Chinese Traditional Culture Literacy. According to the expert evaluation form, it was found that the mean scores of the appropriateness were at 4.51, and the standard deviation was at 0.51, which means the lesson plans had a quality at a very high level.

2. Instruments for Collecting Data

The research instrument to evaluate Chinese traditional cultural literacy consisted of 5 sections, namely: Systematic Knowledge and Cognitive Framework; Internalized Values and Spiritual Affinity; Conscious Behaviour and Practical Competence; Integrated Thinking and Transfer Abilities; Ongoing Emotional Engagement and Internalization Process.

2.1 Systematic Knowledge and Cognitive Framework Test: The Index of Item–Objective Congruence (IOC) of each item ranged from 0.67 to 1, which means the test had content validity.

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The difficulty of the test items ranged from 0.42 to 0.57, the discrimination index ranged from 0.52 to 0.65, and the KR20 was 0.84. proving that the test items are usable.

2.2 Internalized Values and Spiritual Affinity Scales were found to have an Index of Item–Objective Congruence (IOC) of each item, which ranged from 0.67 to 1.00, which means the scales had validity. The Cronbach's Alpha value of the Internalized Values and Spiritual Affinity observation checklist was 0.83, indicating that the scales are reliable.

2.3 Conscious Behaviour and Practical Competence Performance Evaluation: The Index of Item–Objective Congruence (IOC) of each item ranged from 0.70 to 1.00, which means the evaluation form had validity. The Cronbach's Alpha value of the Conscious Behaviour and Practical Competence was 0.86, indicating that the evaluation form is reliable.

2.4 Integrated Thinking and Transfer Abilities Scoring Rubric: The Index of Item–Objective Congruence (IOC) of each item ranged from 0.60 to 1.00, which means the scoring rubric had validity. The Cronbach's Alpha value of the Integrated Thinking and Transfer Abilities checklist was 0.80, indicating that the scoring rubric is reliable.

2.5 Ongoing Emotional Engagement and Internalization Process Scales were found to have an Index of Item–Objective Congruence (IOC) of each item ranging from 0.67 to 1.00, which means the scales had validity. The Cronbach's Alpha value of the Ongoing Emotional Engagement and Internalization Process checklist was 0.83, indicating that the scales are reliable.

2.6 Questionnaire for students' satisfaction toward Kinesthetic Learning Strategy.

The instrument used to measure students' satisfaction with kinesthetic learning strategies was a 20-item student satisfaction questionnaire. Three educational experts evaluated the consistency between each questionnaire item and its operational definition. All 20 items obtained an Item–Objective Congruence (IOC) value of 1.00, indicating that the experts agreed that the items were clearly aligned with the intended constructs.

Students' responses to the questionnaire were measured using a five-point Likert scale. The mean scores of the questionnaire items ranged from 4.47 to 4.72, indicating a high level of student satisfaction with the kinesthetic learning activities.

The reliability of the questionnaire was examined using Cronbach's alpha coefficient. The analysis produced a Cronbach's alpha value of 0.82, which indicates acceptable internal consistency of the instrument.

Data Collection: Data collection on Chinese traditional culture literacy under the instruction of Kinesthetic Learning Strategies was as follows:

1) The sample was given the pretest on Chinese traditional culture literacy.

2) The sample was taught using kinesthetic learning strategies in a Chinese traditional culture course with 12 lesson plans and 12 total hours.

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3) After finishing the instruction, the sample received the posttest using the same instrument that was used in the pretest.

4) The sample was given the students' satisfaction questionnaire.

Data Analysis: In this study, the quantitative data were analyzed using a statistical program according to the research objectives.

1) Compare the students' Chinese traditional culture literacy before and after receiving collaborative learning by using a t-test for dependent samples.

2) Compare the students' Chinese traditional culture literacy with the determined criteria set at 70 percent by using a t-test for one sample.

3) Compare the students' satisfaction with collaborative learning by using the arithmetic mean and standard deviation.

Results

According to the research objectives, the results were as follows:

1. Results of comparing the students' Chinese traditional culture literacy before and after learning through the Kinesthetic Learning Strategies using the t-test for dependent sample analysis.

Table 1 Comparison of the pre-test and post-test scores for overall Chinese traditional culture literacy and its five components (n=40)

Components	Full scores	Pretest scores		Posttest scores		*t*	*p*	Effect size
		M	*SD*	*M*	*SD*			
Systematic Knowledge and Cognitive Framework	90	60.45	7.80	74.08	6.40	12.49 **	.001	1.91
Internalized Values and Spiritual Affinity	50	28.00	2.93	38.33	3.24	20.37**	.001	3.34
Ongoing Emotional Engagement and Internalization Process	100	69.43	7.40	75.00	7.74	5.74**	.001	0.74
Conscious Behaviour and Practical Competence	100	69.15	5.43	75.25	4.78	7.57**	.001	1.19

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Components	Full scores	Pretest scores		Posttest scores		*t*	*p*	Effect size
		M	*SD*	*M*	*SD*			
Integrated Thinking and Transfer Abilities	21	13.38	2.57	17.98	1.25	13.73**	.001	2.28
Overall, Chinese traditional culture literacy	361	240.41	12.65	280.64	11.81	23.35**	.001	3.29

* * p< 0.01

As shown in the paired-samples Table 1, tests were conducted to examine the effects of kinesthetic learning strategies on primary school students' Chinese traditional culture literacy. The results indicated that students' post-test scores (M=280.64, SD=11.81) were significantly higher than their pretest scores (M=240.41, SD=12.65) at the .01 level (t39=23.35, p<.01) with an effect size of d = 3.29, classified as a very large effect. In addition, when considering each dimension, the following was found:

Students' systematic knowledge and cognitive framework posttest scores (M=74.08, SD=6.40) were significantly higher than their pretest scores (M=60.45, SD=7.80) at the .01 level (t39=12.49, p<.01) with an effect size of d = 1.91, classified as a very large effect.

Students' internalized values and spiritual affinity posttest scores (M=38.33, SD=3.24) were significantly higher than their pretest scores (M=28.00, SD=2.93) at the .01 level (t39=20.37, p<.01) with an effect size of d = 3.34, classified as a very large effect.

Students' ongoing emotional engagement and internalization process posttest scores (M=75.00, SD=7.74) were significantly higher than their pretest scores (M=69.43, SD=7.40) at the .01 level (t39=5.74, p<.01) with an effect size of d = 0.74, classified as a very large effect.

Students' conscious behaviour and practical competence posttest scores (M=75.25, SD=4.78) were significantly higher than their pretest scores (M=69.15, SD=5.43) at the .01 level (t39=7.57, p<.01) with an effect size of d = 1.19, classified as a very large effect.

Students' Integrated Thinking and Transfer Abilities posttest scores (M=17.98, SD=1.25) were significantly higher than their pretest scores (M=13.38, SD=2.57) at the .01 level (t39=13.73, p<.01) with an effect size of d = 2.28, classified as a very large effect.

2. The result of comparing the mean score of Chinese Traditional Culture literacy of students after collaborative learning strategies with the determined criterion set at 70 percent of full scores.

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Table 2: The result of the average score of Chinese Traditional Culture Literacy after Kinesthetic Learning Strategies, with the determined criterion set at 70 percent of full scores. (Full score = 361)

Group	n	Criterion score	M	SD	t	p
Experimental group	40	252.7	280.64	11.81	14.95**	.001

** $p < 0.01$

To compare students' Chinese Traditional Culture Literacy with the determined criterion of 70 percent of the full score, a one-sample t-test was conducted using the post-test total scores. As presented in Table 2, the results indicated that students' Chinese Traditional Culture Literacy after learning through kinesthetic learning strategies was significantly higher than the 70 percent criterion at the .01 level of statistical significance (t39 = 14.95, $p < .01$). This finding suggests that students' Chinese Traditional Culture Literacy not only met but substantially exceeded the expected performance standard.

3. Results of assessing the students' satisfaction after learning through the Kinesthetic Learning Strategies using the arithmetic mean and standard deviation analysis.

Table 3 The results of the students' satisfaction after learning through the Kinesthetic Learning Strategies (n= 40)

Dimension of students' satisfaction	Mean	SD	Levels of Satisfaction
1) Satisfaction with Content	4.53	0.50	Very high
2) Satisfaction with the Kinesthetic Learning Strategy	4.63	0.48	Very high
3) Satisfaction with learning activities	4.59	0.49	Very high
4) Satisfaction with the learning atmosphere	4.61	0.49	Very high
5) Satisfaction with learning materials	4.62	0.49	Very high
6) Satisfaction with measurement and evaluation	4.57	0.49	Very high
Overall satisfaction of students	**4.59**	**0.49**	Very high

From the results of mean scores and standard deviation analysis in Table 4, it can be seen that the mean scores of students' satisfaction were at a very high level across all aspects. The

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highest mean score was found in students' satisfaction toward the Kinesthetic Learning Strategy (M = 4.63, SD = 0.48), followed by satisfaction toward the learning materials (M = 4.62, SD = 0.49), the learning atmosphere (M = 4.61, SD = 0.49), and the learning activities (M = 4.59, SD = 0.49). In addition, the students' satisfaction with the measurement and evaluation was at a high level (M = 4.57, SD = 0.49), while the lowest mean score, though still very high, was observed in satisfaction with the course content (M = 4.53, SD = 0.50). The overall students' satisfaction mean score after learning through the Kinesthetic Learning Strategies was 4.59, with SD=0.49. These results indicate that students demonstrated a very high level of satisfaction with the Kinesthetic Learning Strategies implemented in the Chinese Traditional Culture course.

Table 4 Comparing the mean score of students' satisfaction after learning through Kinesthetic Learning Strategies with the determined criterion set at 70 percent (Full scores = 5)

Varible	Full score	Criterion score	*M*	*SD*	*t*	*p*
Students' satisfaction	5	3.51	4.57	0.50	14.93	.001

** p < 0.01

To compare students' satisfaction after the implementation of kinesthetic learning strategies with the determined criterion of 70 percent, a one-sample t-test was conducted using the overall satisfaction scores. The criterion score was set at 3.51, representing 70 percent of the total possible score.

As presented in Table 4, the results showed that the mean score of students' satisfaction was 4.57 (SD = 0.50), which was significantly higher than the determined criterion at the .01 level of statistical significance (t = 14.93, p < .01). This finding indicates that students demonstrated a high level of satisfaction with the kinesthetic learning strategies implemented in the classroom.

Conclusion

In summary, through analysing the arithmetic mean, standard deviation, paired-samples t-test, and single-sample t-test of traditional Chinese cultural literacy among Year 5 pupils at Tianxin Ethnic School before and after implementing kinesthetic learning strategies, Figures 1 and 2 reveal a significant post-intervention improvement in pupils' traditional Chinese cultural literacy. Moreover, pupils' satisfaction with the kinesthetic learning strategy reached its highest level. Consequently, the application of kinesthetic learning strategies within primary Chinese language

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traditional cultural literacy courses is feasible, thereby contributing to the enhancement of traditional Chinese cultural literacy among Year 5 pupils at Tianxin Ethnic School.

Discussion

Discussion of research objectives 1 and 2: The findings of this study indicate that the implementation of kinesthetic learning strategies significantly improved primary school students' Chinese traditional culture literacy. The results showed that students' post-test scores (M=280.64, SD=11.81) were significantly higher than their pre-test scores (M=240.41, SD=12.65) at the .01 level, with a statistically significant difference at the .01 level ($t_{39}=23.35$, $p<.01$). This result suggests that kinesthetic learning strategies can effectively enhance students' understanding of traditional Chinese cultural knowledge and related cultural meanings.

The improvement may be explained by the active and experiential characteristics of kinesthetic learning. Unlike traditional teacher-centered instruction, kinesthetic learning encourages students to participate physically in the learning process through movement-based activities, collaborative tasks, and experiential exploration. Such learning experiences allow abstract cultural knowledge, particularly the pictographic origins and symbolic meanings of Chinese characters, to be transformed into concrete and meaningful learning experiences. As a result, students are able to construct stronger connections between linguistic forms, cultural meanings, and personal learning experiences.

Furthermore, the significant increase in students' post-test scores beyond the predetermined criterion of 70 percent also indicates that the instructional design effectively supported students in achieving the expected learning outcomes. The findings suggest that integrating kinesthetic learning activities into Chinese language instruction can provide students with richer opportunities to interact with cultural content, thereby strengthening both cultural understanding and learning engagement.

Overall, the results demonstrate that kinesthetic learning strategies provide an effective instructional approach for promoting Chinese traditional culture literacy in primary school Chinese language classrooms. By combining physical participation with cultural learning tasks, such strategies can enhance students' comprehension of cultural knowledge while also improving their motivation and engagement in the learning process.

Discussion of research objective 3: The results of this study indicated that students' satisfaction significantly improved through the implementation of kinesthetic learning strategies. The overall students' satisfaction after learning through the kinesthetic learning strategies was at a very high level (M = 4.59, S.D. = 0.49), suggesting that students demonstrated highly positive attitudes toward the Chinese Traditional Culture course. Most students reported that kinesthetic

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activities made the learning of Chinese character origins more interesting, engaging, and meaningful. Through bodily movement, action-based exploration, and group interaction, students were able to better understand the meanings and cultural connotations of Chinese characters, which enhanced their emotional engagement and overall learning experience.

The high level of satisfaction can be largely attributed to the diversified and action-based learning activities embedded in the kinesthetic learning approach. Unlike traditional character instruction that relies heavily on explanation and rote memorization, kinesthetic learning incorporates bodily enactment of pictographic meanings, movement-based character performance, and creative group tasks. These concrete physical experiences enabled students to actively construct knowledge rather than passively receive information, aligning with principles of embodied and experiential learning. In addition, timely and multi-source feedback from teachers and peers helped students recognize their progress, strengthened their sense of competence, and sustained positive learning emotions throughout the instructional process.

Furthermore, kinesthetic learning fostered a supportive and low-anxiety classroom climate through increased social interaction and cooperative participation. Group-based activities encouraged communication, shared responsibility, and collective success, which enhanced students' motivation, self-efficacy, and emotional investment in learning. Repeated successful experiences in understanding and expressing Chinese characters through bodily participation further reinforced students' confidence and satisfaction. Overall, the findings suggest that kinesthetic learning not only improves students' understanding of Chinese character origins and traditional cultural meanings but also creates an emotionally engaging learning environment that promotes motivation, self-efficacy, and holistic development in primary Chinese language education.

Recommendation

1) Recommendations for Implications

Based on the findings of this study, several pedagogical implications are proposed to enhance the effective implementation of kinesthetic learning in primary school Chinese language classrooms, particularly for the teaching of Chinese character origins and traditional cultural literacy.

First, kinesthetic learning should be systematically integrated into the Chinese language curriculum rather than applied sporadically. Structured and continuous use of bodily enactment, role-play, and movement-based cultural activities can strengthen students' cognitive connections with Chinese characters and traditional cultural meanings, thereby enhancing traditional cultural literacy and learning satisfaction.

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Second, kinesthetic activities should be closely aligned with clear instructional objectives and curriculum standards. Physical participation in classroom tasks should directly support character recognition, semantic understanding, and cultural interpretation, ensuring that kinesthetic engagement promotes meaningful cognitive learning rather than merely recreational participation.

Third, teachers should provide continuous instructional scaffolding and formative assessment during kinesthetic learning activities. Through observation checklists, performance rubrics, guided reflection, and timely feedback, teachers can help students connect bodily experience with linguistic knowledge and cultural understanding, facilitating deeper internalization of traditional cultural values.

Finally, attention should be given to classroom management and inclusive participation. Well-structured procedures, appropriate time allocation, and differentiated kinesthetic tasks can maintain learning efficiency while accommodating individual differences, thereby promoting sustained engagement and holistic development in primary school Chinese language classrooms.

2) Recommendations for Future Research

Based on the findings of this study, several directions for future research are proposed to further develop the application of kinesthetic learning in Chinese traditional culture education.

First, future research should examine how kinesthetic learning can be systematically integrated into different areas of the Chinese language curriculum beyond Chinese character learning. In the present study, kinesthetic activities were primarily designed around the pictographic origins and cultural meanings of Chinese characters, which proved effective in enhancing students' cultural understanding. However, it remains unclear how such embodied learning strategies could be adapted for other components of Chinese traditional culture education, such as classical poetry, traditional etiquette, or festival culture. Further studies could therefore explore how kinesthetic learning can be designed to support different types of cultural content.

Second, future studies should investigate the practical challenges teachers face when implementing kinesthetic learning in traditional Chinese culture instruction. During classroom practice, issues such as limited instructional time, classroom management during movement-based activities, and teachers' familiarity with kinesthetic instructional design may influence the effectiveness of such strategies. Research focusing on teachers' instructional experiences and pedagogical adaptations would provide valuable insights for improving the feasibility and sustainability of kinesthetic learning in real classroom settings.

Third, future research could further examine how different types of kinesthetic activities influence students' cultural understanding and engagement. The present study demonstrated an

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overall improvement in students' traditional cultural literacy; however, it remains unclear which specific types of kinesthetic tasks contribute most strongly to learning outcomes. Identifying the most effective activity designs would help refine instructional strategies for Chinese traditional culture education.

Finally, future research may explore how kinesthetic learning supports the transfer of cultural understanding into students' daily cultural practices. Traditional culture education aims not only to improve students' knowledge but also to promote cultural identity and behavioural expression. Longitudinal studies could therefore investigate whether students continue to demonstrate cultural understanding.

References

Bruun, J., & Christiansen, F. V. (2016). Kinaesthetic activities in physics instruction: Image schematic justification and design based on didactic situations. *Nordic Studies in Science Education, 12*(1), 56–72. https://journals.uio.no/nordina/article/view/969

Chen, L., & Yang, R. (2023). The influence of traditional Chinese culture on educational philosophy and practice. *Contemporary Education and Teaching Research, 4*(7), 322–326. https://www.researchgate.net/publication/373707913

Chinese Social Sciences Net. (2014). *Educating and cultivating postgraduate students in traditional cultural literacy*. http://www.cssn.cn

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process* (Rev. ed.). D. C. Heath.

Fleming, N. D., & Mills, C. (1992). Helping students understand how they learn. *The Teaching Professor, 7*(4), 44–63.

General Office of the Central Committee of the Communist Party of China, & General Office of the State Council of the People's Republic of China. (2017, January 25). *Opinions on implementing the project of inheritance and development of excellent traditional Chinese culture*. http://www.gov.cn/zhengce/2017-01/25/content_5163472.htm

General Office of the Communist Party of China, & General Office of the State Council of the People's Republic of China. (2017, January 25). *Opinions on implementing the project of inheritance and development of excellent traditional Chinese culture*. http://www.gov.cn/zhengce/2017-01/25/content_5163472.htm

Huang, W., Xu, T., & Zhong, Z. (2024). A qualitative study on Chinese primary school EFL teachers' beliefs about incorporating intercultural competence into foreign language teaching. *Heliyon, 10*(12), e32635. https://doi.org/10.1016/j.heliyon.2024.e32635

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Hunter, M. (1982). Mastery teaching. *Educational Leadership, 40*(3), 13–17. https://files.ascd.org/staticfiles/ascd/pdf/journals/ed_lead/el_198209_hunter.pdf

Kafadar, T. (2021). Cultural heritage in the social studies curriculum and cultural heritage awareness of middle school students. *International Journal of Progressive Education, 17*(2), 260–274. https://doi.org/10.29329/ijpe.2021.332.16

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Lau, K. L. (2024). Enhancing students' classical Chinese reading through a two-year self-regulated learning and flipped classroom intervention. *Reading and Writing*. https://doi.org/10.1007/s11145-024-10516-9

Luo, H., Siripala, W., Somrang, K., & Chiamthong, P. (2024). The influence of a Chinese traditional culture course on primary students' language learning. *International Journal of Education & Literacy Studies, 12*(3), 90–98. https://files.eric.ed.gov/fulltext/EJ1455530.pdf

Ministry of Education of the People's Republic of China. (2022a). *Compulsory education curriculum program and curriculum standards (2022 edition)*. http://www.moe.gov.cn/srcsite/A26/s8001/202204/t20220420_619921.html

Ministry of Education of the People's Republic of China. (2022b). *Chinese language curriculum standards for compulsory education (2022 edition)*. Beijing Normal University Press.

Ning, L. (2023). *A study of Thai undergraduate students' Chinese language learning anxiety* (Master's thesis, Rangsit University). https://rsuir-library.rsu.ac.th/bitstream/123456789/2918/1/LIJUN%20NING.pdf

Petrigna, L., Thomas, E., Brusa, J., Rizzo, F., Scardina, A., Galassi, C., Lo Verde, D., Caramazza, G., & Bellafiore, M. (2022). Does learning through movement improve academic performance in primary schoolchildren? A systematic review. *Frontiers in Pediatrics, 10*, 841582. https://doi.org/10.3389/fped.2022.841582

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology, 61*, 101860. https://doi.org/10.1016/j.cedpsych.2020.101860

Sun, J. (2013). *On the inheritance and development of the excellent traditional culture of China*. China Social Sciences Press.

Yang, M., Lü, L. J., & Ding, Y. R. (2019). Investigation on the status quo of primary school students' identification with excellent traditional Chinese culture and strategies for improvement. *China Educational Technology, 6*, 44–51.

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Yao, S., Zhang, D., & Shen, Q. (2022). Research on anxiety of learning Chinese as a second or foreign language in and outside mainland China: A systematic review of the literature 1999–2020. *Frontiers in Psychology, 13*, 843858. https://doi.org/10.3389/fpsyg.2022.843858

Zheng, R. (2024). Constructing the early-stage framework of cultural identity enlightenment in heritage education. *Sustainability, 16*(21), 9402. https://doi.org/10.3390/su16219402

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