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Cross-Cultural Adaptation in International Chinese Teaching: Thai Learners' Classifier Errors and Localized Interventions

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Abstract: Against the backdrop of deepening China-Thailand educational cooperation and the global promotion of Chinese language education, during the author's teaching tenure in Thailand (May 2025 - March 2026) at a public high school in Phatthalung Province, classifiers remain a core difficulty for Thai learners due to significant cross-linguistic and cross-cultural differences between Chinese, Thai, and English. This study takes 28 Thai Grade 10 learners (A1 level, taught by the author during the tenure) as the research object, adopting a mixed-methods design (error corpus analysis, pre-test/post-test, semi-structured interviews) over a four-week period (conducted in October-November 2025, within the teaching tenure). The results show that the main errors are overgeneralization of (51.7%), collocation errors (31.0%), and omission (17.3%), caused by the interaction of Sino-Thai cross-linguistic-cultural differences and English cross-linguistic transfer. After intervention with localized strategies (real-object matching + trilingual annotation + interactive quick Q&A), learners' average accuracy significantly increased from 38.5% (SD=8.2) to 62.1% (SD=7.6) (paired sample t-test: t=-12.36, p<0.05), with 80% of learners recognizing the effectiveness of real-object teaching. This study not only provides practical references for Chinese teachers in Southeast Asian public schools under resource-constrained conditions but also enriches the research on cross-cultural adaptation in international Chinese education, offering insights for the localization of second language teaching in cross-border educational cooperation.

Keywords: international Chinese education; Thai learners; classifier errors; cross-cultural teaching adaptation; localized interventions

1. Introduction

During the author's teaching period in Thailand from May 2025 to March 2026, Chinese language instruction in Thai public high schools experienced rapid expansion as part of cross-cultural educational exchange. With the increasing integration of Chinese courses into secondary education, Chinese teaching has gradually shifted from exploratory practice to more systematic implementation. However, this developmental stage has been accompanied by a series of cross-cultural instructional challenges. Most learners begin Chinese study with no prior foundation and are influenced by a dual linguistic background, with Thai as their first language and English as a widely used second language. At the same time, teaching resources remain limited, and existing textbooks often lack adaptation to local learners' cognitive patterns. As a result, cross-linguistic and cross-cultural interference is evident in the learning process, leading to frequent grammatical errors [1].

Among various grammatical elements, classifiers, as a mandatory grammatical category in modern Chinese with strong semantic and cultural constraints, constitute a major obstacle for Thai learners. In contrast to Thai, which allows relatively flexible classifier usage within its linguistic conventions, and English, which does not employ an independent classifier system, Chinese classifiers require precise noun–classifier

matching based on semantic features such as shape, quantity, category, and conventional usage. This structural and semantic strictness poses substantial difficulties for learners accustomed to different linguistic and cultural frameworks [2].

Existing studies in international Chinese education have highlighted the importance of cross-culturally adapted teaching in improving learning outcomes in Southeast Asia, and research on classifier acquisition among Thai learners has provided preliminary insights. Contrastive analyses have shown that classifier errors are largely attributable to cross-linguistic transfer, including partial positive transfer from Thai and negative transfer arising from flexible collocation patterns embedded in learners' habitual language use [3]. Research in second language acquisition has also demonstrated that learners' prior linguistic and cultural knowledge exerts a direct influence on grammatical acquisition, and greater structural distance between languages is associated with higher error rates [4]. In addition, classroom-based studies have suggested that situational teaching approaches aligned with learners' intuitive cognitive tendencies can reduce classifier-related errors in early-stage instruction [5].

Despite these contributions, limitations remain within the existing body of research. First, many studies focus on university students or primary school learners, leaving high school learners underrepresented, even though this group occupies a critical stage in cross-cultural second language development and faces distinct learning pressures, such as balancing multiple language subjects simultaneously. Second, previous analyses often emphasize single-source interference, particularly mother-tongue transfer, while insufficient attention is paid to the combined influence of Thai and English in multilingual learning environments. Third, many proposed instructional strategies require extensive teaching time or material support, which limits their applicability in public high schools where class hours and instructional resources are constrained [6].

Against this background, the present study focuses on Chinese learners in Thai public high schools as a representative group of cross-cultural second language learners in Southeast Asia. It systematically examines the types and underlying cross-cultural causes of classifier errors and proposes localized, practical teaching strategies that can be integrated into routine instruction under resource-limited conditions. The study addresses three core questions: (1) What are the main types and distribution patterns of classifier errors among Thai high school learners in cross-cultural Chinese learning contexts? (2) What cross-linguistic and cross-cultural factors contribute to these errors, and how do influences from Thai and English interact during acquisition? (3) Can localized, cross-culturally adapted teaching strategies effectively improve learners' accuracy in classifier usage? By answering these questions, the study aims to enhance instructional effectiveness in Thai public high schools and to provide practical reference value for the localization and cross-cultural adaptation of international Chinese education in similar multilingual learning contexts.

2. Research hypotheses

Hypothesis 1: The main types of classifier errors of Thai Chinese learners (in cross-cultural learning contexts) are overgeneralization of the general classifier 'ge', collocation errors, and omission, among which overgeneralization of 'ge' is the most frequent. This is because the general classifier has the widest usage range in Chinese, and learners tend to use it as a default choice due to the cross-linguistic-cultural influence of the flexible collocation of Thai classifiers (rooted in Thai linguistic norms) and the absence of classifiers in English, which is consistent with the error characteristics of Southeast Asian cross-cultural second language learners.

Hypothesis 2: The causes of classifier errors are the interaction of Sino-Thai cross-linguistic-cultural differences and English cross-linguistic transfer. Specifically, Sino-Thai differences in classifier-noun matching conventions (shaped by respective cultural and cognitive norms) lead to collocation errors; the mandatory nature of Chinese classifiers

and the optional nature of Thai classifiers (allowed in informal Thai cultural communication), combined with the lack of classifiers in English, result in omission errors; the overgeneralization of the general classifier 'ge' is caused by the joint influence of Thai's flexible use of general classifiers (consistent with Thai linguistic-cultural habits) and English's "number + noun" structure, which is a typical error mechanism in cross-cultural second language acquisition.

Hypothesis 3: Simple cross-culturally adapted localized interventions (real-object matching + trilingual annotation + interactive quick Q&A) can significantly improve learners' accuracy in using classifiers. These strategies are tailored to Thai learners' cross-cultural cognitive characteristics (preferring intuitive and interactive learning) and the actual teaching conditions of Thai public high schools in international Chinese education (limited resources and class hours), and can effectively reduce cross-linguistic-cultural interference, enhance learning effectiveness, and provide a replicable model for similar cross-border second language teaching contexts.

3. Research design

This study adopts a mixed qualitative-quantitative research design tailored to cross-cultural second language teaching research, aiming to systematically address the research questions in the context of international Chinese education in Thailand. The specific design includes the definition of cross-culturally representative research objects, the selection of research tools suitable for dual linguistic-cultural background learners, the implementation of cross-culturally adapted teaching intervention, and targeted data analysis methods, as follows:

3.1. Research object

The research object is 28 Grade 10 learners from a public high school in Phatthalung Province, southern Thailand (16 females, 12 males, aged 15-16), representing a typical cross-cultural second language learning group in international Chinese education in Southeast Asia. All learners were taught by the first author during her/his teaching tenure in Thailand (May 2025 - March 2026), with no prior Chinese learning experience before entering high school. During the study period (October-November 2025), they had studied Chinese for 4-6 months under the first author's instruction (2 classes/week, 45 minutes/class, totaling 32-48 class hours). According to the Common European Framework of Reference for Languages (CEFR), their Chinese level is A1 (beginner level), with the following characteristics: mastery of 300-500 basic daily vocabulary, understanding of simple fixed-structure sentences, and difficulty in flexible grammar application- especially classifiers, a grammatical point with distinct cross-linguistic-cultural differences. Notably, all learners are proficient in Thai (mother tongue) and have 6-8 years of English learning experience (basic level for understanding simple instructions), forming a dual linguistic-cultural background that is typical of Southeast Asian learners in international Chinese education. This dual background is a key cross-linguistic-cultural factor affecting their Chinese classifier acquisition, making the research object representative of similar cross-border second language learners.

3.2. Research Tools for Cross-Cultural Teaching Research

To collect valid data for error analysis and intervention effect evaluation, three targeted research tools are adopted:

3.2.1. Error corpus collection tool

The error corpus was constructed from learners' in-class assignments, after-class homework, and unit tests collected during a four-week cross-cultural Chinese teaching period from October to November 2025. The collection focused on all sentences containing Chinese classifiers and followed three criteria. First, validity: sentences were required to

be independent and complete, excluding fragments caused by writing interruptions or unfinished expressions. Second, targetedness: the corpus concentrated on sentences involving three high-frequency classifiers—*ben*, *zhang*, and *zhi*—which are commonly introduced at the elementary level and closely associated with daily communication. Third, authenticity: all sentences had to be completed independently by learners without teacher guidance or peer assistance. After screening, a total of 87 valid sentences were obtained, among which 58 contained classifier errors. These sentences constituted the core corpus for subsequent error type analysis.

3.2.2. Pre-test and post-test papers

The pre-test and post-test papers were identical in structure and difficulty and were designed based on elementary-level Chinese curriculum requirements and the actual teaching content. Each test consisted of 15 objective items, including 10 fill-in-the-blank questions requiring learners to supply the appropriate classifier and 5 multiple-choice questions requiring selection of the correct classifier from four options. The test content covered the three high-frequency classifiers (*ben*, *zhang*, and *zhi*) and their corresponding nouns, such as *shu* (book), *baozhi* (newspaper), *bi* (pen), *zhaopian* (photo), and *xin* (letter), all of which were consistent with classroom instruction. The total score was 100 points, with each question assigned approximately 6–7 points, and the test duration was 20 minutes. Prior to formal administration, the test papers were piloted with five Thai learners of similar learning backgrounds to examine item appropriateness and instruction clarity, and minor adjustments were made accordingly.

3.2.3. Oral feedback outline

Oral feedback was collected through semi-structured interviews conducted after the post-test. To minimize linguistic barriers, the interviews were carried out in learners' first language, and each learner participated in a one-on-one session with the researcher, who was proficient in the language. The interview outline consisted of three core questions: (1) whether learning classifiers through real objects, such as textbooks, pens, and postcards, helped learners understand and remember classifier usage; (2) whether learners found it easier to choose appropriate classifiers after the teaching intervention; and (3) whether learners preferred learning classifiers through rapid question-and-answer activities combined with real-object presentation and what suggestions they had for improvement. Each interview lasted approximately three to five minutes. Learners' responses were recorded in detail and systematically organized for qualitative analysis.

3.3. Teaching intervention process

The teaching intervention was implemented during regular cross-cultural Chinese classes between October and November 2025 and was integrated into routine instruction without adding extra class hours. The intervention spanned two weeks and covered two to three class sessions, totaling approximately 90–135 minutes. Focusing on the three high-frequency classifiers (*ben*, *zhang*, and *zhi*), the intervention adopted three localized and cross-culturally adapted teaching strategies designed to accommodate learners' dual linguistic backgrounds and cognitive habits.

The first strategy was cross-culturally adapted real-object matching instruction. Based on learners' daily experiences and cognitive preferences, the researcher prepared 15 commonly used local objects, including textbooks, postcards, and pens. These objects were grouped into five book-type items corresponding to *ben*, five paper-based items corresponding to *zhang*, and five writing instruments corresponding to *zhi*. During class, the researcher first presented the objects sequentially and modeled the corresponding noun–classifier phrases, such as *yi ben shu*, *yi zhang baozhi*, and *yi zhi bi*, followed by learner repetition. The objects were then displayed in random order, requiring learners to respond quickly with the correct phrases. Finally, learners worked in small groups of four to five

students, taking turns displaying objects and producing responses, while the researcher provided guidance and corrective feedback. This strategy aimed to establish an intuitive association between classifiers and nouns through familiar physical objects, thereby reducing cognitive load caused by cultural unfamiliarity and facilitating understanding of semantic matching rules.

The second strategy involved trilingual annotation to support cross-linguistic connections. In textbooks and on the blackboard, the researcher provided annotations for classifier phrases using a three-part format consisting of the Chinese expression, a first-language equivalent, and an English equivalent. During instruction, differences among the three languages were explicitly compared. For example, the use of a bound-object classifier in learners' first language was contrasted with the Chinese classifier *ben* for books, while English expressions were noted for their lack of a distinct classifier category. By clarifying these structural differences, this strategy helped learners reduce cross-linguistic interference and draw on familiar linguistic knowledge to better understand Chinese classifier usage.

The third strategy was interactive rapid question-and-answer practice to enhance classroom engagement. In response to learners' preference for interactive learning in cross-cultural settings, the researcher designed 20 short-response questions related to classifier usage, such as how to express "one pen" in Chinese or which classifier should be used with "newspaper." Learners were required to respond within three seconds. Correct responses were acknowledged through verbal encouragement and small symbolic rewards. This approach increased classroom interaction, stimulated learner participation, and reinforced classifier usage through repeated practice, contributing to improved accuracy in a time-efficient manner.

3.4. Data analysis methods

To comprehensively explore cross-culturally rooted classifier errors and the effectiveness of adapted teaching strategies, corresponding qualitative and quantitative methods are used to analyze the data collected by the above tools, with a focus on linking results to learners' dual linguistic-cultural background and cross-cultural teaching contexts, specifically:

3.4.1. Qualitative analysis of error corpus

First, the 58 error sentences identified in the corpus were systematically reviewed and classified according to error types. Based on commonly adopted classification criteria for Chinese classifier errors and in consideration of the actual learning characteristics of Thai learners, the errors were divided into three categories: overgeneralization of *ge* (using *ge* for nouns that require other classifiers), collocation errors (using inappropriate classifiers with specific nouns), and omission (omitting classifiers in quantitative expressions) [7].

Subsequently, two researchers independently coded all error sentences. The inter-coder consistency coefficient reached 0.92, indicating a high level of reliability. For cases in which discrepancies occurred, further discussion was conducted until consensus was achieved. Finally, the proportional distribution of each error type was calculated, and representative error examples were selected for detailed qualitative analysis.

3.4.2. Quantitative analysis of pre-test and post-test scores

The pre-test and post-test papers were graded by the same researcher according to the unified scoring standards, and the scores were recorded in Excel for statistical analysis. First, the average accuracy rate of each test was calculated (accuracy rate = number of correct answers / total number of questions × 100%); then, a paired sample t-test was conducted using SPSS 26.0 to compare the significant differences between pre-test and post-test scores, with a significance level set at $\alpha=0.05$. This analysis was used to verify

whether the teaching intervention had a significant effect on improving learners' classifier use accuracy.

3.4.3. Statistical analysis of oral feedback

The researchers sorted out the learners' oral feedback answers, counted the number of learners who held positive, neutral, and negative attitudes towards each teaching strategy, and calculated the proportion of each attitude. For learners' suggestions, thematic analysis was conducted to extract key improvement opinions, which provided a reference for the optimization of subsequent teaching strategies.

Ethical Considerations: This study was conducted as part of the author's formal teaching practice at a public high school in Phatthalung Province, Thailand (teaching tenure: May 2025 - March 2026), and strictly complied with the ethical standards for international educational research and local educational regulations in Thailand. Prior to the study, verbal consent was obtained from the participating school's administration to integrate the research into regular Chinese classes (no additional burden on learners or teaching schedules). All participants (Thai Grade 10 learners, aged 15-16) and their legal guardians were fully informed of the research purpose, procedures, and data usage (anonymous processing for academic publication only) and provided voluntary written informed consent. The research process prioritized learners' physical and mental well-being, with no potential risks such as academic pressure or privacy disclosure. All data were anonymized and securely stored to ensure compliance with international research ethics on participant protection.

4. Empirical analysis

Based on the research design and collected data, this chapter conducts empirical analysis from four aspects: error type distribution, intervention effect, learner feedback, and error causes, as follows:

4.1. Descriptive stats of error types

The analysis of the 58 error sentences in the corpus indicates that Thai Chinese learners exhibit three primary types of classifier errors, with clear differences in their distribution. As shown in Table 1, overgeneralization of "*ge*" was the most frequent error, accounting for 51.7% of cases (30 instances), followed by collocation errors (18 cases, 31.0%) and omission errors (10 cases, 17.3%).

Table 1. Distribution of Classifier Error Types and Their Cross-Cultural Characteristics.

Error type	Number of cases	Proportion (%)	Cross-cultural Error Characteristics
Overgeneralization of "*ge*"	30	51.7	Influenced by flexible general classifiers in Thai linguistic-cultural context
Collocation errors	18	31.0	Confusion of semantic-cultural features due to cross-linguistic-cultural differences between Chinese and Thai
Omission	10	17.3	Negative transfer of English "number + noun" structure and Thai classifier omission convention in informal cultural communication
Total	58	100.0	--

Typical cases of each error type are presented as follows:

Overgeneralization of *ge*: Learners used *ge* for nouns that should be paired with *ben*, *zhang*, or *zhi*, such as *yi ge shu* (correct: *yi ben shu*), *yi ge baozhi* (correct: *yi zhang baozhi*), and *yi ge bi* (correct: *yi zhi bi*). This error is the most common because learners tend to rely on

the general classifier *ge*, which they encounter first in Chinese learning, as a strategy to simplify the complex noun–classifier matching rules.

Collocation errors: Learners selected inappropriate classifiers for nouns, for example, *yi zhi shu* (correct: *yi ben shu*), *yi ben zhaopian* (correct: *yi zhang zhaopian*), and *yi zhang bi* (correct: *yi zhi bi*). These errors mainly result from confusion regarding the semantic features of classifiers, such as mixing up *ben* (for bound objects like books), *zhang* (for flat objects like photos), and *zhi* (for long and thin objects like pens).

Omission: Learners omitted classifiers in quantity expressions, for example, *san shu* (correct: *san ben shu*), *liang baozhi* (correct: *liang zhang baozhi*), and *wu bi* (correct: *wu zhi bi*). Although less frequent, this error is particularly typical, reflecting negative transfer from English, which does not use classifiers, and from Thai, where classifier omission is permitted in some contexts.

4.2. Changes in accuracy before and after intervention

The pre-test and post-test scores show that the teaching intervention has a significant effect on improving learners' classifier use accuracy. As shown in Figure 1, the average accuracy rate of the pre-test was 38.5% (SD=8.2), and the average accuracy rate of the post-test reached 62.1% (SD=7.6), an increase of 23.6 percentage points. The paired sample t-test results show that $t=-12.36$, $df=27$, $p<0.001$, indicating a statistically significant difference between the pre-test and post-test scores, which verifies that the three localized teaching strategies can effectively improve learners' performance in using classifiers.
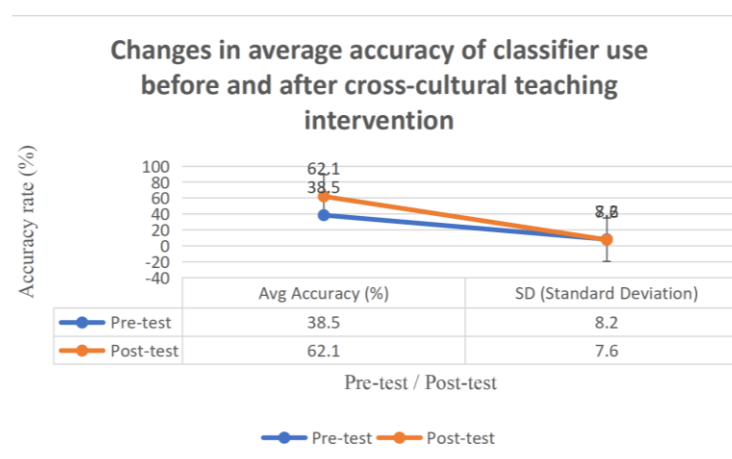

Figure 1. Changes in average accuracy of classifier use before and after cross-cultural teaching intervention.

In terms of individual performance, 25 out of 28 learners (89.3%) showed an improvement in post-test scores compared with the pre-test, with the highest improvement of 46.7% and the lowest improvement of 6.7%; only 3 learners (10.7%) had no significant change or a slight decrease, which may be due to individual differences in learning ability and participation. In terms of question types, the improvement in fill-in-the-blank questions (from 35.2% to 58.7%, an increase of 23.5 percentage points) was slightly lower than that in multiple-choice questions (from 43.8% to 67.5%, an increase of 23.7 percentage points), which is because fill-in-the-blank questions require learners to actively recall and produce classifiers, while multiple-choice questions provide options for reference, reflecting the difficulty of active application of classifiers for elementary-level learners.

4.3. Analysis of oral feedback results

The oral feedback results indicate that most learners responded positively to the localized teaching strategies. Specifically, for the real-object matching strategy, 80% of

learners (22 cases) reported that it was "very helpful" or "helpful," noting that "seeing the actual objects makes it easier to remember the classifier" and "handling the book and pen helps me associate them with *ben* and *zhi*." Fifteen percent of learners (4 cases) considered it "average," while 5% (2 cases) found it "not helpful," mainly because they felt that "the objects are too simple and not challenging enough."

For trilingual annotation: 76% of learners (21 cases) expressed approval, believing that "Thai and English translations help me understand the difference", "I can compare with the Thai classifier I know"; 20% of learners (5 cases) thought it was "unnecessary", arguing that "learning Chinese should focus on Chinese itself", and 4% of learners (2 cases) said they "did not pay attention to the annotations".

For interactive quick Q&A: 72% of learners (20 cases) liked this method, stating that "the quick response game is fun", "the rewards make me more motivated to participate"; 20% of learners (5 cases) felt "nervous" about the 3-second response time, and 8% of learners (3 cases) thought "the questions are too simple".

In addition, learners put forward some suggestions, such as "adding more types of objects", "extending the response time appropriately", "designing more difficult questions", which provide valuable references for the optimization of teaching strategies in future teaching.

4.4. Error cause analysis

Combined with the error corpus and feedback results, the causes of Thai learners' Chinese classifier errors are mainly the interaction of Sino-Thai linguistic differences and English negative transfer, as detailed below:

4.4.1. Sino-Thai cross-linguistic-cultural differences: The primary cause

The cross-linguistic and cultural differences between Chinese and Thai classifier systems constitute the fundamental source of learner errors, which are mainly reflected in two aspects.

First, there are differences in the strictness of classifier–noun matching conventions. In Chinese, classifiers exhibit strong semantic and cultural binding with nouns based on cognitive categorization and usage norms. For example, *ben* is typically used for bound objects such as books, *zhang* for flat objects such as paper, and *zhi* for long and thin objects such as pens. In contrast, the Thai classifier system is relatively flexible due to different linguistic and cultural traditions. Although Thai has specific classifiers corresponding to certain noun categories (e.g., *lem* for books, *phaen* for flat objects, and *dam* for pens), it also allows the use of general classifiers (such as *tua*) for a wide range of nouns, and strict classifier–noun collocation is not obligatory [8]. This cross-linguistic difference leads Thai learners to rely on a "one classifier for multiple nouns" strategy in their native language, which in turn results in the overgeneralization of the Chinese general classifier *ge*.

Second, there is a difference in the obligatory use of classifiers in quantity expressions. In Chinese, when expressing a specific quantity of a countable noun, the classifier is mandatory and cannot be omitted (e.g., "one book" or "two pens" must include an appropriate classifier). In Thai, although classifiers are commonly used in formal contexts, they may be omitted in informal daily communication when the quantity is contextually clear [9]. For instance, Thai allows expressions equivalent to both "three CL book" and "book three" to convey the meaning "three books," and both are considered acceptable. This structural difference causes Thai learners to omit classifiers in Chinese quantity expressions, leading to frequent omission errors.

4.4.2. English cross-linguistic-cultural transfer: The reinforcing factor

English, as the second language widely learned by Thai high school learners, has a reinforcing effect on classifier errors. The most prominent feature of English is the absence of an independent classifier category; when expressing quantity, it directly

uses "number + noun" (e.g., a book, two pens) without adding a classifier. This structure is deeply rooted in learners' cognitive systems, making them unconsciously transfer this habit to Chinese learning, leading to omission errors (e.g., "san shu" instead of "san ben shu") [10]. In addition, English has no semantic distinction between classifiers, so learners lack the experience of "matching classifiers according to noun features", which increases the difficulty of mastering Chinese classifier collocation rules and indirectly leads to collocation errors [11].

For example, a learner said in the oral feedback: "In English, we say 'a book' directly, so I often forget to add "ben" in Chinese"; another learner mentioned: "I don't know why 'book' uses "ben" and 'photo' uses "zhang"—in English, they are both 'a + noun'". These statements confirm that English negative transfer strengthens the errors caused by Sino-Thai differences, making it more difficult for learners to correct their mistakes.

4.4.3. Learners' individual factors: The auxiliary cause

In addition to cross-linguistic factors, learners' individual learning characteristics also affect the occurrence of errors [12]. First, elementary-level learners have limited Chinese vocabulary and grammatical knowledge, and their understanding of the semantic features of nouns and classifiers is shallow. For example, they cannot accurately distinguish the "flat" feature of photos (corresponding to "zhang") and the "bound" feature of books (corresponding to "ben"), leading to collocation errors. Second, learners' learning motivation and participation vary: some learners are passive in class and do not actively participate in real-object matching and quick Q&A exercises, resulting in poor mastery of classifiers and low improvement in post-test scores.

4.5. Cross-Cultural Teaching Implications for International Chinese Education

The error analysis and intervention results provide important implications for cross-cultural Chinese teaching in Southeast Asia and other cross-border second language education contexts. First, cross-linguistic-cultural differences are the core barrier to elementary-level learners' classifier acquisition, so teaching strategies must be tailored to local learners' linguistic-cultural backgrounds (e.g., the dual Thai-English background of Thai learners). Second, the effectiveness of cross-culturally adapted real-object matching teaching confirms that "culturally familiar input" is crucial for cross-cultural second language teaching- using local objects that learners encounter in daily life can reduce cognitive load caused by cultural unfamiliarity and enhance knowledge retention. Third, trilingual annotation fully leverages learners' existing linguistic-cultural knowledge, which is a feasible way to bridge cross-linguistic-cultural gaps in resource-constrained teaching contexts. Finally, interactive quick Q&A caters to the active and participatory learning style preferred by Southeast Asian learners, highlighting the importance of "student-centered" design in cross-cultural classrooms, which is a core principle of international education [13].

5. Conclusion

This chapter summarizes the main research findings rooted in the author's teaching practice in Thailand (May 2025 - March 2026), clarifies the theoretical and practical value of the study for cross-cultural adaptation in international Chinese education, compares it with existing research, points out limitations of the cross-border teaching research, and puts forward targeted teaching suggestions and research prospects for Southeast Asian international Chinese education:

5.1. Theoretical value

This study enriches the theoretical framework of cross-cultural adaptation in international Chinese education and has important implications for cross-border second language acquisition research. First, it verifies the applicability of cross-linguistic transfer theory and second language acquisition theory in cross-cultural teaching contexts, confirming that the interaction of mother tongue (Thai) and second language (English) cross-linguistic-cultural transfer is an important factor affecting classifier acquisition-supplementing existing research that only focuses on single-language transfer. Second, it refines the classification of Thai learners' Chinese classifier errors under cross-cultural contexts, clarifying the distribution characteristics of overgeneralization of "ge",collocation errors, and omission, and providing a more detailed cross-cultural error typology for subsequent international Chinese education research. Third, it explores the effectiveness of cross-culturally adapted localized teaching strategies, providing new empirical evidence for the localization and cross-cultural adaptation of international Chinese education theories in Southeast Asia, and promoting the development of targeted teaching theories for cross-border second language learner groups.

5.2. Practical value

The research results have strong practical guiding significance for cross-cultural Chinese teaching in Southeast Asian public high schools and similar cross-border second language education contexts. First, for teachers in resource-constrained cross-cultural teaching contexts, the proposed three simple cross-culturally adapted localized interventions (real-object matching + trilingual annotation + interactive quick Q&A) are highly operable: they do not require additional teaching resources, can be integrated into daily classes, and provide a replicable model for improving the quality of cross-cultural second language teaching. Teachers can refer to this model to design targeted teaching activities for other grammatical points with cross-linguistic-cultural differences, improving overall teaching effectiveness. Second, for international Chinese textbook compilation, the research reveals the key difficulties and error-prone points of Thai high school learners in classifier acquisition under cross-cultural contexts, suggesting that textbooks should increase the proportion of culturally familiar real-object illustrations, add Sino-Thai-English trilingual annotations (aligning with learners' dual linguistic-cultural background), and design more interactive exercises- so as to better adapt to the cross-cultural cognitive characteristics of Southeast Asian learners. Third, for educational management departments in China and Thailand, the research provides data support for formulating cross-cultural Chinese teaching policies, emphasizing the importance of cross-culturally adapted localization teaching and teacher training in international Chinese education, and promoting the sustainable development of China-Thailand educational cooperation and international Chinese education in Southeast Asia.

5.3. Comparison with existing research

Compared with existing studies on Thai learners' Chinese classifier errors, this study has the following advantages and innovations:

First, in terms of research objects, existing studies mostly focus on college students or primary school learners, while this study targets high school learners who are in the critical period of second language acquisition and face unique cross-cultural learning pressures and dual linguistic-cultural backgrounds (proficient in both Thai and English), filling the research gap in cross-cultural Chinese teaching for this group in international Chinese education.

Second, in terms of error causes, existing studies often focus on single-factor analysis such as mother tongue transfer, while this study systematically explores the interaction of Sino-Thai cross-linguistic-cultural differences, English cross-linguistic transfer, and

learners' individual factors, providing a more comprehensive and in-depth explanation of error mechanisms in cross-cultural second language acquisition.

Third, in terms of teaching strategies, existing studies propose complex and resource-intensive strategies such as long-term situational teaching and project-based learning, while this study designs simple, feasible, and low-cost cross-culturally adapted localized strategies that are more in line with the actual conditions of Thai public high schools in cross-cultural teaching contexts, with stronger promotion value in international Chinese education.

However, this study also has certain limitations:

First, the sample size is relatively small (N=28) and limited to one public high school in Phatthalung Province, Thailand, which may limit the generalizability of the research results. Future research should expand the sample scope, including learners from different regions, grades, and schools in Thailand, to improve the representativeness of the data.

Second, the intervention cycle is short, with only 2-3 classes of intervention, and the long-term effect of the teaching strategies has not been verified. Future research should conduct follow-up tests 1-3 months after the intervention to explore whether learners can maintain the improved accuracy of classifier use.

Third, this study focuses exclusively on three high-frequency classifiers (*ben*, *zhang*, and *zhi*), and the applicability of the findings to other classifiers, such as *ge*, *liang*, and *zhi* (for animals or similar objects), requires further investigation. Future research could broaden the range of classifiers studied to provide more comprehensive instructional guidance.

5.4. Suggestions and prospects

Based on the research results and limitations, the following suggestions and prospects are proposed:

5.4.1. Teaching suggestions

For Chinese teachers in Thai public high schools:

Prioritize real-object teaching: Make full use of common daily objects familiar to learners to carry out classifier teaching, establishing an intuitive connection between classifiers and nouns, and reducing the difficulty of abstract grammar learning.

Strengthen cross-linguistic comparison: Explicitly compare the differences between Chinese classifiers and Thai/English expressions in class, helping learners recognize the uniqueness of Chinese classifiers and avoid negative transfer.

Design layered exercises: Arrange exercises from easy to difficult, starting with simple real-object response exercises, then transitioning to fill-in-the-blank exercises, and finally to comprehensive application exercises, gradually improving learners' active application ability.

Pay attention to individual differences: For learners with slow progress, provide additional one-on-one guidance and more practice opportunities, and adjust teaching strategies according to their feedback to ensure that all learners can benefit.

5.4.2. Research prospects

Future research can be carried out in the following directions: First, expand the research scope- increase the sample size to include learners from different regions, grades, and school types in Thailand, and extend the research to other grammatical points (e.g., tense, prepositions) to explore the general rules of cross-cultural acquisition of Chinese grammar by Thai learners. Second, extend the research cycle- conduct a 6-12 month follow-up study to verify the long-term retention effect of cross-culturally adapted teaching strategies in international Chinese education. Third, innovate research methods-combine eye-tracking technology, brain-computer interface technology, and other

modern research tools to explore the cognitive process of Thai learners' classifier acquisition from a cross-cultural neurological perspective, providing more in-depth theoretical support for international Chinese teaching practice. Fourth, strengthen cross-country comparative research- conduct comparative studies with Chinese learners from other Southeast Asian countries (e.g., Vietnam, Malaysia, Indonesia) with different linguistic-cultural backgrounds, exploring commonalities and differences in cross-cultural adaptation of international Chinese teaching, and contributing to the formulation of regionalized international Chinese education standards.

In conclusion, based on the author's teaching practice in Thailand (May 2025 - March 2026), Chinese classifier teaching in Thai public high schools is a complex and systematic project that requires full consideration of learners' dual linguistic-cultural background, cognitive characteristics, and local teaching conditions. This study, rooted in actual teaching scenarios during the tenure, provides a new perspective and practical path for solving the difficulties in classifier teaching through error analysis and intervention research.

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