

A Study of Thai Undergraduate Students' Chinese Language Learning Anxiety, Achievement, and Their Anxiety Coping Strategies

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Abstract

Theoretically, anxiety and coping strategies in learning a foreign language can have negative and positive impacts on learners' learning achievement. This study aimed to investigate: 1) Thai undergraduate students' Chinese language learning anxiety; 2) relationship between their Chinese language learning anxiety and achievement; and 3) their Chinese learning anxiety coping strategies. Mixed methods research was used to fulfil the first research objective, the quantitative research method for the second objective, and the qualitative research method for the third objective. The quantitative sample included a total of 302 students in their first, second, third, and fourth years enrolled in academic year 2022 selected through stratified random sampling and 12 students through purposive sampling for the qualitative sample. A questionnaire and structured interview questions made in Google Forms were the main research instruments. The quantitative data were analyzed by using mean, standard deviation and Pearson correlation coefficient, and thematic analysis for the qualitative data.

The research results were found as follows: 1) the first-year students had the highest anxiety level while the second, third and fourth-year students had a high anxiety level with the highest mean score of Chinese speaking anxiety; 2) Pearson correlation coefficient analysis showed a positive relationship between their learning anxiety and achievement with $r(259) = 0.039$, $p > 0.05$, which contradicted related theories; and 3) since the students lacked opportunities to practice Chinese in daily lives, extensive practices on their own and with native Chinese speaking teachers and friends either online or offline were most commonly used anxiety coping strategies, followed by Chinese media for Chinese language learning.

Keywords: Chinese Language Learning Anxiety; Achievement; Anxiety Coping Strategies; Thai Undergraduate Students

Introduction

The development of Chinese education in Thailand has been supported through an ongoing collaboration with the Chinese government. As of 2021, it was reported by People's Daily (2021) that 16 Confucius Institutes were established; more than 2,000 primary and secondary schools offered Chinese language classes to exceeding one million students. Unsurprisingly, Chinese becomes the second most commonly used and studied foreign language in Thailand where it is one of the world's fastest-growing countries for Chinese language learning.

In the process of learning Chinese in Thailand, Thai students often find it challenging for one main reason that is Chinese is a difficult language for them to learn successfully. Chinese pronunciation and writing systems are in particular different from Thai, difficult to learn to speak and write in Chinese. If Thai students cannot pronounce accurately or intelligibly when learning in class or taking exams, they can feel frustrated and anxious. Chinese characters are unique and differ significantly from Thai consonants. Learning Chinese characters requires more effort and time for Thai students due to the complex structure and meaning of each character. Liu (2022) reports that Thai students often have problems with handwriting such as messy writing, incorrect component positions, and making the same mistakes. If teachers excessively emphasize stroke order and writing standards in class, Thai students may lose interest, and their anxiety in learning Chinese may increase. Inside the classroom, they feel frightened when being asked by the teacher (Cheng, 2018). The difficulties with Chinese language skills Thai students encounter in the class often lead them to anxiety.

Thai students' challenges in learning Chinese in the classroom align with Gardner's (2010) foreign language anxiety that learners experience in the classroom and in their daily lives when they use the language. Anxiety is one of the affective factors that can negatively impact the process of learning Chinese as Krashen (1980) proposes in his Affective Filter Hypothesis that high anxiety can hinder students from effectively absorbing the content taught in class and potentially has a negative impact on their learning outcomes. Similar to Gardner and MacIntyre's (1993) socio-educational model of second language acquisition (SLA), an increase of students' language anxiety can lead to a decrease in their learning achievement while an improvement of learning achievement can result in reduction of their language learning anxiety, indicating a negative relationship between language anxiety and learning achievement. To overcome the anxiety, they need to have learning anxiety coping strategies.

In the past decade, research into Thai students' anxiety in learning Chinese in Thailand has not been extensively investigated, for only seven studies were discovered (i.e., Zhang, 2013, Tang, 2015, Meng, 2019, Zheng, 2021, Li, 2021, Sun, 2022, Xu et al, 2022). Five of those studies employed the quantitative research method to investigate the causes and current state of Chinese learning anxiety among Thai students from primary school to university (Tang, 2015, Meng, 2019, Zheng, 2021, Sun, 2022, Xu et al, 2022). Their findings showed one similarity in that learners at any stage of learning Chinese were more or less prone to experience learning anxiety. However, they only explored Thai language learners' Chinese learning anxiety and overlooked its relationship with

their learning achievement. Research into Chinese language learning anxiety coping strategies for Thai students was also limited; only three studies conducted in the context of learning English as a foreign language (EFL) were found (Akkakoson, 2016; Prasansri, 2020; Wilang, 2022). In addition, a recent study by Cao and Tananuraksakul (2023) found that Thai undergraduates' Chinese learning motivation levels did not correlate with their achievement although they were assumed to be motivated intrinsically by the nature of taking Chinese as a major subject at a private university in Thailand. Their lack of opportunity to use Chinese outside the classroom was reported to be the cause.

Thus this study aimed to bridge the gap by examining the relationship between anxiety and achievement in Chinese language learning among Thai undergraduate students majoring in Chinese in their first, second, third and fourth year of study as well as their Chinese language learning anxiety coping strategies at a private university in Thailand. The research could provide university lecturers of Chinese with insightful findings.

Research Objectives

The objectives were to study the following:

- 1) Thai undergraduate students' Chinese language learning anxiety;
- 2) relationship between Thai undergraduate students' Chinese language learning anxiety and their achievement; and
- 3) Thai undergraduate students' Chinese language learning anxiety coping strategies.

Research Questions

- 1) What was the Chinese language learning anxiety of Thai undergraduate students?
- 2) Was there a relationship between Thai undergraduate students' Chinese language learning anxiety and their achievement?
- 3) How did Thai undergraduate students cope with their Chinese language learning anxiety?

Related Literature Review

Anxiety and achievement in Chinese language learning as well as language learning anxiety coping strategies were three variables in this study. The first variable was the key concept that could have a negative impact on the second variable. The third variable could help the target group overcome their anxiety in learning Chinese and learn the language more effectively. To meet the research objectives, the first variable was defined based on Horwitz (1986) as negative emotions such as tension, uneasiness, and worries that the target group's experienced during the process of learning Chinese speaking, listening, reading, and writing skills. The second variable referred to Chinese knowledge or skills attained at a certain level through the process of learning (Zaitolakma et al, 2018). Since the target university employed the official Hanyu Shuiping Kaoshi (HSK Test) to assess the students' individual progress in learning Chinese, and HSK scores were reliable indicators, the HSK scores were adopted as a means to measure their Chinese learning

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achievement. To pass HSK3 to HSK6, students needed to score at least 180 or 220 out of 300. Scoring over 240 marks indicated a high level of achievement. The third variable was the strategies that the students used to overcome anxiety in the process of learning Chinese (Prasansri, 2020).

In the contexts of learning Chinese in Thailand, past studies from primary school level to university level, Thai students appeared to consistently experience anxiety in speaking skills (Zhang, 2013), writing skills (Zhao, 2020), language use (Zheng, 2021) and being questioned by teachers (Tang, 2015; Meng, 2019). Only two studies by Zheng (2021) and Xu et al. (2022) investigated the relationship between anxiety and achievement in learning Chinese. They similarly found that anxiety in learning Chinese had a negative relationship with the achievement, meaning that the high anxiety level, the low learning accomplishment. Their research findings aligned with Krashen's (1980) Affective Filter Hypothesis as well as Gardner and MacIntyre's (1993) socio-educational model of SLA. Both theories suggested that individual differences such as attitudes, motivation, and anxiety were variables that influenced the outcomes of second language learning.

There has been no research into Chinese learning anxiety coping strategies for Thai students. Three studies conducted in the context of learning EFL were found. Akkakoson (2016) and Prasansri (2020) examined Thai university students' English language learning and coping strategies by applying Oxford and Crookall's (1989) language learning strategies social, affective, metacognitive, compensatory, cognitive, and memory related strategies. The former noted that social strategies were the most frequently used techniques among Thai students. The latter discovered that high speaking ability students employed both cognitive and metacognitive strategies while low speaking ability students relied on affective strategies to reduce the anxiety. Wilang (2022) found 12 coping strategies that Thai engineering students used in full English medium instruction classroom, including preparation, relaxation, positive thinking, peer support, resignation, asking teacher's help, translation, self-talk, being focused on a task, lesson review, and metacognition.

Based on Krashen's (1980) Affective Filter Hypothesis as well as Gardner and MacIntyre's (1993) socio-educational model of SLA, Thai undergraduate students' Chinese language learning anxiety (an independent variable) and achievement (a dependent variable) were investigated. These two variables were proposed to have a negative relationship. Strategies they used to cope with the anxiety may help them learn Chinese better. This conceptual framework was shown in Figure 1.

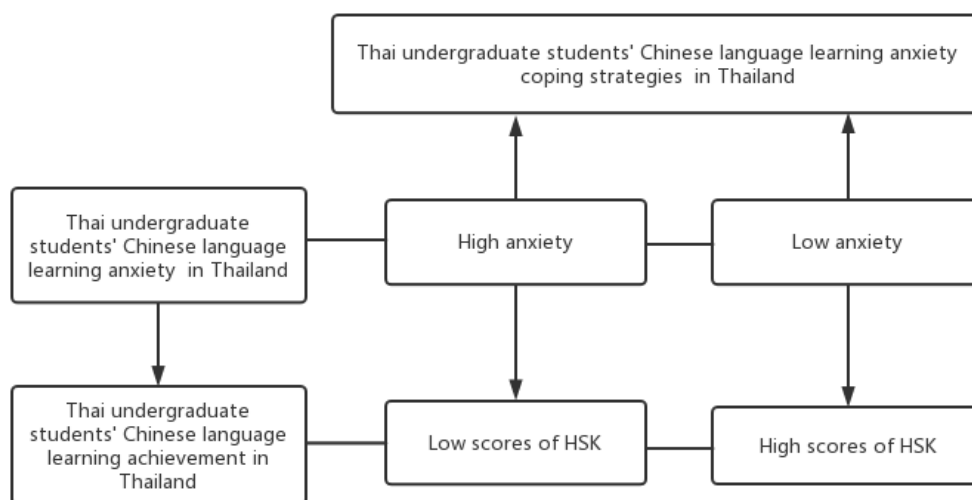


Figure1 Conceptual Framework

Research Methodology

1. Research Design

A mixed research method was used to answer the first research question. The quantitative outcomes mainly answered the second research questions, and the qualitative results primarily answered the third research question.

2. Population and Sample

The population consisted of 403 (N = 403) Thai undergraduate students majoring in Chinese in their first, second, third and fourth year at a private university, enrolled in academic year 2022, and 201 of them were selected using stratified random sampling for the quantitative sample. However, the actual number of participants that completed the questionnaire was 302 (n=302). For the qualitative sample, simple random sampling was used to select 12 students based on their anxiety levels, and their real names were disclosed. Pseudonyms were used instead.

3. Research Instruments

An online questionnaire and structured interview questions were the main research instruments. The online questionnaire created through Google Form had two parts: demographic information and Chinese learning anxiety. The first part included gender, age, year of study, use of Chinese, length of Chinese learning, and HSK level and scores. The second part had 16 items using a 4-Likert scale adopted from Xu et al (2022). For the reliability, a pilot study was conducted with 30 Thai undergraduate students majoring in Chinese at a different university in Thailand using Cronbach's Alpha coefficient with the result of 0.81.

The questions for the structured interviews were made in the Google Form after the analysis of quantitative research results to gain a better understanding and supplement subjective aspects of the language learning anxiety and coping strategies. Those questions

included: how your Chinese study was; what Chinese language skills you thought difficult/easy and why; how you felt when you had difficulty in learning those skills; and what you normally did to deal with the difficulty.

4. Data Collection

After the research ethics approval, the Chinese Program lecturers were engaged to aid in participant recruitment for the online questionnaire. Subsequently, the questionnaire link was emailed to participants. Google Form facilitated recording responses and email addresses, which were further used for qualitative data collection. Participants with varying levels of low and high anxiety were invited to write down their answer to the questions in Google Form in Thai; 12 from first to fourth years voluntarily returned their forms within two days. Confidentiality of their personal details and responses was ensured. All the data were collected in June, 2023.

5. Data Analysis

Statistical Product and Service Solutions (SPSS) was used for quantitative data analysis; descriptive statistics of frequency and percentage were calculated for the demographic information while mean and standard deviations (SD) were computed for the Chinese learning anxiety. The results were interpreted according to the 4-rating scales. Pearson correlation coefficient was determined to examine the relationship between Chinese learning anxiety and HSK scores.

Thematic analysis was used to analyze the answers to the structured interview questions (Mortensen, 2020). The data were coded into two themes: Chinese language learning anxiety and language learning anxiety coping strategies. After that, the data were encoded based on the assigned preliminary codes and grouped into these sub-themes: speaking anxiety, listening anxiety, reading anxiety, and writing anxiety.

Research Results

1. Thai Undergraduate Students' Chinese Language Learning Anxiety

According to the first research objective, the results showed that the overall mean of Chinese language learning anxiety at a high level ($\bar{X}=2.53$), with the highest mean score of anxiety in speaking ($\bar{X}=2.64$), followed by writing ($\bar{X}=2.59$), listening ($\bar{X}=2.44$) and reading ($\bar{X}=2.44$). The detail was shown in Table 1.

Table 1 *Descriptive Statistics of anxiety in learning CFL(n=302)*

Skills		SD	Meaning
Speaking anxiety	2.64	0.91	High
Listening anxiety	2.44	0.98	High
Reading anxiety	2.44	0.89	High
Writing anxiety	2.59	0.89	High
Overall Mean	2.53	0.92	High

From Table 2, the overall mean of speaking anxiety was at a highest level ($\bar{X}=2.64$). During the Chinese class, they could feel their heart pounding when they were going to be called on with the highest mean score ($\bar{X}=2.92$). In line with the qualitative findings from the six respondents with high and low levels of anxiety, speaking Chinese was the most challenging for them because they had “limited opportunity to speak Chinese in daily life and hesitated to respond to questions, and Chinese grammar was difficult” for them.

The overall mean of writing anxiety was at a high level ($\bar{X}=2.59$). The respondents agreed that during the Chinese class, they froze up when they were unexpectedly asked to write Chinese characters with the highest mean score ($\bar{X}=2.99$). In line with the qualitative findings from the five respondents with high and low levels of anxiety, “writing Chinese was the most challenging for them because Chinese characters stroke orders and grammar were difficult”.

The overall mean of listening anxiety was at a high level ($\bar{X}=2.44$). During the Chinese class, it frightened them when they didn't understand what the teacher was saying in Chinese with the highest mean score ($\bar{X}=2.79$). However, the qualitative findings among the four respondents with high and low levels of anxiety, three of them indicated that listening skills were the easiest to learn, because they like the Chinese accent. Only one of them mentioned that the grammar in listening comprehension was the most difficult, when she could not understand what others were saying, she would feel discouraged.

The overall mean of reading anxiety was at a high level ($\bar{X}=2.44$). During the Chinese class, they got so confused when they read Chinese and could not remember what they were reading with the highest mean score ($\bar{X}=2.78$). The qualitative findings from two high level of anxiety respondents indicated that requiring them to read lengthy articles within a short period of time diminished their interest in Chinese reading felt anxious.

Table 2 Descriptive Statistics of Chinese language learning anxiety (n=302)

	Item		S.D.	Meaning
Speaking anxiety	1. During my Chinese class, it embarrasses me to volunteer answers.	2.49	0.93	High degree
	2. During my Chinese class, I can feel my heart pounding when I'm going to be called on.	2.92	0.94	High degree
	3. During my Chinese class, I feel very self-conscious about speaking Chinese in front of other students.	2.74	0.99	High degree
	4. During my Chinese study, I feel confident when I speak in Chinese.	2.40	0.79	High degree
	5. During my Chinese study, I get frustrated when I cannot distinguish among the Chinese tones even after I have worked hard to learn them.	2.09	0.96	High degree
Listening anxiety	6. During my Chinese study, I get nervous when all the Chinese tones sound the same to me.	2.33	1.02	High degree
	7. During my Chinese study, I get anxious when I don't understand what my classmates are saying in Chinese.	2.54	0.99	High degree
	8. During my Chinese study, it frightens me when I don't understand what the teacher is saying in Chinese.	2.79	0.95	High degree

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Reading anxiety	9 .During my Chinese study, I get so confused when I read Chinese and can't remember what I'm reading.	2.78	0.90	High degree
	10. During my Chinese study, I feel confident when I am reading in Chinese.	2.44	0.79	High degree
	11.During my Chinese study, I feel intimidated whenever I see a whole page of Chinese in front of me.	2.16	0.92	High degree
	12 .During my Chinese study, I have difficulty distinguishing among the Chinese characters when reading Chinese.	2.37	0.91	High degree
Writing anxiety	13. During my Chinese class, I freeze up when I am unexpectedly asked to write Chinese characters.	2.99	0.87	High degree
	14. During my Chinese study, writing Chinese characters makes me forget what I'm trying to convey.	2.49	0.91	High degree
	15. During my Chinese study, I'm usually at ease when I'm writing in Chinese.	2.21	0.82	High degree
	16. During my Chinese study, I feel unsure of myself when I'm writing in Chinese.	2.65	0.96	High degree

2. Relationship between Thai Undergraduate Students' Chinese Language Learning Anxiety and Their Achievement

According to the second research objectives, there was showed a positive relationship between Thai undergraduate students' Chinese language learning anxiety and their achievement as $r = .039$, $p > 0.05$. *The detail* was shown in Table 3.

Table 3 Pearson (r) correlation between Thai undergraduate students' Chinese language learning anxiety and their achievement.

Anxiety		
Learning Achievement	Pearson Correlation	.039
	Sig. (2-tailed)	.256
	n	259

*Correlation is significant at the 0.05 level (2-tailed).

From Table 4, the overall correlation between the students' anxiety in speaking, listening, reading, and writing with their learning achievement $r(259) = .017$, $r(259) = .049$, $r(259) = .018$, $r(259) = .052$, $p > .05$. was positive.

The first-year students' learning achievement showed a positive correlation with Chinese language learning anxiety in all the language skills with $r(31) = .129$, $r(31) = .109$, $r(31) = .103$, $r(31) = .207$, $p > .05$. The second-year students' learning achievement indicated a negative correlation with speaking and reading anxiety with $r(67) = -0.040$, $r(67) = -0.006$, $p > 0.05$. Writing anxiety showed a positive relationship with their learning achievement with $r(67) = 0.097$, $p > 0.05$. Listening anxiety was not found to be related to their learning achievement with $r(67) = 0.001$, $p > 0.05$.

The third-year students' learning achievement exhibited a positive relationship with anxiety in listening and writing with $r(72) = 0.039$, $r(72) = 0.039$, $p > 0.05$. Their learning achievement indicated a negative relationship between anxiety in speaking and reading, with $r(72) = -0.021$, $r(72) = -0.081$, $p > 0.05$. The fourth-year students' learning achievement indicated a positive relationship between anxiety in reading and listening with $r(89) = 0.045$, $r(89) = 0.054$, $p > 0.05$. Speaking anxiety was not found to be related to their learning achievement with $r(89)$

= -0.001, $p > 0.05$. Their learning achievement indicated a negative relationship between anxiety in writing with $r(72) = -0.135$, $p > 0.05$.

Table 4 Pearson (r) correlation between Chinese language learning anxiety and achievement

Learning Achievement		Speaking anxiety	Listening anxiety	Reading anxiety	Writing anxiety
The First-Year (n=31)	Pearson Correlation	.129	.109	.103	.207
	Sig. (2-tailed)	.440	.515	.538	.212
The Second-Year (n=67)	Pearson Correlation	-.040	.001	-.006	.097
	Sig. (2-tailed)	.726	.995	.960	.398
The Third-Year (n=72)	Pearson Correlation	-.021	.039	-.081	.039
	Sig. (2-tailed)	.842	.717	.450	.715
The Fourth-Year (n=89)	Pearson Correlation	-.001	.045	.054	-.135
	Sig. (2-tailed)	.991	.664	.604	.191
Overall (n=259)	Pearson Correlation	.017	.049	.018	.052
	Sig. (2-tailed)	.750	.723	.638	.379

*Correlation is significant at the 0.05 level (2-tailed).

3. Thai Undergraduate Students' Chinese Language Learning Anxiety Coping Strategies

According to the third research objectives, the first-year students showed high anxiety levels but achieved high HSK scores (222). In qualitative findings, one respondent with low anxiety (Boony) mentioned that "my primary coping strategy involved memorizing vocabulary, practicing daily, and using Chinese with friends. And I found interest in Chinese movies and TV shows made listening easier." Another high-anxiety respondent (Polly) expressed that "I managed speaking anxiety through self-talk and conversations with Chinese friends, online, offline, and those met during exchange programs in China."

The second-year students had a high level of learning anxiety but received high HSK scores (205). From the qualitative results, two respondents with high and low anxiety levels (Sali and Iris) both pointed out that writing was the most challenging skill, so they "practiced extensively" on their own. And Iris would "find proficient Chinese friends who could tutor her." Another high-anxiety respondent (Wan) managed her listening anxiety by "practicing more often and reviewing the lesson."

The third-year students had high learning anxiety and had low scored in the HSK test (182). From the qualitative findings, three respondents, with both high and low anxiety levels found speaking difficult (Selina, Yuli, and Wari). Selina immersed herself by consuming Chinese media. Yuli turned to online resources and teachers guidance. Wari practiced speaking and learned new words consistently. One low-anxiety respondent (Ali), found writing was difficult. She "took extra classes and self-studied, fully immersing herself in the language."

The fourth-year students had high level of learning anxiety and received low scores in the HSK test (208). Two respondents with high and low anxiety levels (May and Sandy) experienced anxiety in speaking. May would "use simple sentences to convey the meaning" and Sandy "tried to memorize more words and practice speaking with teachers or friends." One respondent with a low anxiety level (Britt) had difficulties in writing, so she would "make an effort to review her lessons regularly."

All in all, it was observed that among the 12 respondents, individuals with a low level of anxiety tended to engage in independent learning strategies, such as memorizing Chinese vocabulary and watching Chinese movies. Conversely, those with a high anxiety level were more inclined to seek external resources for assistance, such as seeking guidance from proficient Chinese teachers or friends, and utilizing Chinese social media platforms for learning. It was noteworthy that both high-anxiety and low-anxiety individuals strongly endorsed the strategy of practicing extensively with others in Chinese, as indicated by consistent high usage. This summary could be seen in Table 5.

Table 5 Students' Responses to Learning Anxiety Coping Strategies

Students' Responses to Learning Anxiety Coping Strategies	High-level anxiety	Low-level anxiety	Total
Memorizing vocabulary in Chinese	0	3	3
Watching Chinese movies or TV	0	2	2
Practicing extensively with others in Chinese	4	4	8
Reviewing the lesson	1	0	1
Seeking guidance from proficient Chinese teachers or friends	2	1	3
Utilizing Chinese social media platforms for learning	2	0	2
Taking extracurricular tutoring classes	0	1	1

Discussion

1. Thai Undergraduate Students' Chinese Language Learning Anxiety

From the results of the first research objective, it was found that the Thai undergraduates experienced negative emotions during the process of learning Chinese in the class (Horwitz, 1986). Of all the Chinese language skills, they had more anxiety in speaking Chinese than the other skills. Similar to Zhang's (2013) findings, Thai undergraduate students exhibited notable levels of speaking anxiety. They felt frightened when being asked by the teacher (Cheng, 2018). In line with the qualitative results from the six respondents with high and low levels of anxiety, speaking Chinese was the most challenging for them. The differences between Chinese and Thai grammar (Jia, 2018) as well as lack of opportunity to practice and improve their spoken Chinese as part of daily life (Cao & Tananuraksakul, 2023) appeared to discourage them when learning.

Anxiety in writing Chinese was the second highest mean score. The students felt unsure when writing in Chinese, similar to Li's (2021) study in that Thai students experienced anxiety when facing with the differences between the Chinese and Thai writing systems and that making mistakes could discourage them. It was the same as the qualitative results from three high anxiety students and two low anxiety students that writing Chinese was the most challenging for them due to difficulties in acquiring character stroke orders and grammar.

The overall mean scores of anxiety in listening and reading were the same. Although the absence of certain phonemes in Thai that exist in Chinese may render Thai students anxious when they could not understand what was being said (Sun, 2022), listening did not seem to be too difficult for the target students as they were aware of how to improve their listening skills. Based on the three respondents with high and low levels of anxiety, they possessed positive attitudes toward the Chinese accent, and Chinese listening was the easiest to learn through watching television and listening to Chinese songs. According to Sui's (2019) study, Thai young people spend a considerable amount of time online every day and particularly enjoy watching movies and listening to music, which implies that the students could learn and improve their Chinese listening skills better on their own in their leisure time. Only one of them felt discouraged with listening comprehension ability due to limited Chinese grammar knowledge, similar to Xie and Luo (2021). Inadequate knowledge of Chinese vocabulary and difficult Chinese grammar rendered the Thai undergraduates anxious about reading in Chinese. Based on the qualitative findings from two high anxiety respondents, being required to read lengthy articles within a short period of time could induce anxiety and diminish their interest in Chinese reading; they may lack background knowledge required for effective comprehension of lengthy articles as reported by Zhao (2020).

2. Relationship between Thai Undergraduate Students' Chinese Language Learning Anxiety and Their Achievement

From the results of the second research objectives, it was found that the overall quantitative results indicated positive relationship between their learning anxiety and achievement, which contradicted Krashen's (1980) Affective Filter Hypothesis as well as Gardner and McIntyre's (1993) socio-educational model of SLA that the higher anxiety, the lower learning achievement. The first-year students' learning achievement showed a positive correlation with Chinese language learning anxiety in all the language skills, so they experienced negative emotions during the process of learning Chinese in the class (Horwitz, 1986). Nevertheless, they could achieve good results perhaps because the first-year subjects primarily covered basic content, which simplified the learning materials (Zhang, 2013).

The second-year students' learning achievement had a negative correlation with speaking and reading anxiety, reflecting their confidence in speaking ($\bar{X}=2.40$) and reading ($\bar{X}=2.44$)

voluntarily. Writing anxiety had a positive relationship with achievement due to challenges like Chinese character strokes (Liu, 2022) and grammar complexities (Meng, 2019). Listening anxiety did not impact achievement, as they knew how to self-improve this skill. The third-year students' learning achievement positively correlated with listening and writing anxiety, due to their lower anxiety in these two skills maybe because listening being easier to learn and thus causing less anxiety compared to other skills (Li, 2021). Their low learning achievement indicated a negative relationship with high anxiety in speaking and reading. Qualitative findings suggested anxiety in those two skills due to they lacked of opportunity to practice Chinese outside the class (Cao & Tananuraksakul, 2023) and the requirement to read lengthy articles (Zhao, 2020).

The fourth-year students' learning achievement positively correlated with reading and listening anxiety. Their low learning achievement indicated a negative relationship with high anxiety in writing, potentially due to increased learning anxiety at higher levels, as content becomes more advanced and challenging (Tang, 2015). Speaking anxiety was not found to be related to achievement, indicating other factors besides anxiety, especially the lack of regular use of Chinese in daily life, might influence the relationship. Personal information revealed most respondents didn't engage in activities beyond Chinese classes (77%) or speak Chinese at home (29%), potentially negatively impacting speaking anxiety.

3. Thai Undergraduate Students' Chinese Language Learning Anxiety Coping Strategies

From the results of the third research objectives found that, two respondents from the first year, with high and low anxiety levels, coped by memorizing vocabulary, independent practice, and seeking help from Chinese friends and teachers. Similar to Akkakoson's (2016) study, implementing affective strategies can ameliorate oral anxiety, particularly via practices such as positive self-talk and self-reinforcement. Three respondents from the second year, with high and low anxiety levels, experienced anxiety in writing and listening, coped by practicing Chinese extensively, seeking guidance from skilled teachers or friends, and reviewing lessons. Similar to Prasansri's (2020) findings that highly anxious students frequently utilized cognitive strategies, including natural setting practices and structured exercises targeting language components and pronunciation.

Four respondents from the third year, had anxiety when learning Chinese speaking and writing skills. So they adopting diverse anxiety coping strategies: utilizing Chinese social media platform for learning, seeking guidance from Chinese teachers or friends, practicing extensively, memorizing vocabulary, and taking extracurricular tutoring. Similarly to Wilang (2022), Thai university students employed peer support, asking teachers for help, preparation, Google search for answers, and self-talk to manage EFL learning anxiety. Three respondents from the fourth year, had anxiety when learning Chinese speaking and writing skills. They coped by memorizing

vocabulary, watching Chinese movies or television, and practicing extensively with others in Chinese. Both the respondents from the third and fourth years experienced speaking and writing anxiety, adopting similar strategies of vocabulary memorization and practicing extensively with others in Chinese. This differs from Prasansri's (2020) findings, where Thai adult EFL students with lower speaking skills often used self-encouragement to alleviate speaking anxiety.

Thai undergraduates primarily employed extensive self-practice and interactions with native Chinese speakers, both online and offline, as their most common anxiety coping strategies. This could stem from they lacked opportunities to practice Chinese in their daily lives (Cao & Tananuraksakul, 2023). The second frequent strategy was using Chinese media for language learning. Sui (2019) highlighted that among Thai students in China, the use of Chinese and international websites while browsing the internet was nearly balanced, with 23.81% dedicating more time to Chinese sites.

Conclusion

This study investigated Thai undergraduate students' anxiety in Chinese language learning and its relationship with their achievement as well as the way in which they cope with their learning anxiety using a mix research method. The overall quantitative results collected from 302 Thai undergraduate students enrolled in Chinese program showed their high level of anxiety in Chinese language learning, which positively correlated with their high learning achievement. The first and second year students had high anxiety levels, but they obtained a high score of the HSK. The third and fourth-year students also had high anxiety levels, but they did not achieve the HSK scores required by the university, which implied that the higher level of study, the higher level of learning anxiety, resulting in a decline in learning achievement.

Among the different language skills anxiety, speaking skill exhibited the highest level of anxiety, with students felt anxious when required to express themselves in Chinese involuntary. This can be attributed to the differences between Chinese and Thai grammar, as well as the limited opportunities to practice and improve their spoken Chinese in daily life, which contribute to their anxiety. Additionally, writing, reading, and listening were also sources of concern. But reading and listening anxiety were relatively lower.

The qualitative results support this conclusion. Among the twelve respondents, six of them identified speaking as the most difficult and made them felt anxiety skill, while listening was considered the easiest and most easily learned skill. When experiencing anxiety, the majority of them would employ strategies such as practicing extensively and utilizing Chinese social media platforms for learning, which proved to be effective in alleviating their anxiety in these areas.

Recommendations

Recommendations for Chinese teachers or lecturers include the following: 1) be aware of language learning anxiety their students can experience during the teaching and learning process in the classroom, especially speaking anxiety; 2) adjust their teaching methods so as to avoid any possible language learning anxiety; 3) create more opportunities for students to practice Chinese using media technology or simple and understandable teaching methods for Chinese grammar and character stroke order teaching; and 4) guide students to find anxiety coping strategies suitable for them.

Since the study investigate 302 Thai undergraduate students majoring in Chinese at one private university in Thailand, the generalizability of the findings to other universities in Thailand may be limited. And this study focused on students' anxiety in Chinese language learning and did not examine other factors that could impact learning achievement in Chinese. Therefore, future research could expand the sample size and delve deeper into investigating other factors that influence students' achievement in Chinese language learning.

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