



## Chinese Learning Motivation and Academic Self-Efficacy of Thai Senior High School Students

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Received 20/01/2023	<b>ABSTRACT</b>  Motivation and academic self-efficacy influence learners' second language acquisition and individual differences. This study aimed to address a research gap among these variables with the Thai high school students studying Chinese as a foreign language by exploring the level of students' motivation and academic self-efficacy and investigating the relationship between motivation, academic self-efficacy, and individual differences among Thai high school students studying Chinese as a foreign language. A school in Trang, Thailand, was purposively selected as a case study due to the role of the Chinese language as a compulsory language course for the students, and 123 high school students from this school were recruited as research participants. The data collection was drawn from a quantitative method. The main research design in the quantitative part of the study was correlational. The results showed that Thai high school students had a low level of motivation in learning Chinese from the L2MSS perspectives ( $\bar{x} = 2.420$ ) and had a moderate level of academic self-efficacy in Chinese language learning ( $\bar{x} = 2.639$ ). Learning motivation and self-efficacy were statistically significantly correlated with students' age and Chinese language proficiency level but not statistically significantly correlated with gender, ethnicity, and duration of Chinese learning. The regression equation of motivation and self-efficacy was derived from linear regression analysis as language motivation = $-0.572 + 1.134 * \text{Self-efficacy}$ . The results of this study also provide valuable insights for Thai Chinese teachers and native Chinese teachers to inspire students' motivation and improve academic self-efficacy in Chinese language learning.
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## Introduction

In recent years, with the development of China's economy, enthusiasm for learning Mandarin from the world has become higher and higher (Koh & Haji-Othman, 2021). China's "The belt and road" policy has brought China and the world's economic development and has provided a good opportunity for the spread of Chinese. Thailand is one of the most active countries in participating in this policy. More and more Chinese enterprises and Chinese businessmen have come to Thailand to do business, invest, and set up factories (Punyaratabandhu & Swaspitchayaskun, 2018). Qi & Lemmer (2013) stated that China is not only a global political player but also an important market and trading partner for the world. Related to these economic and political factors is the rapidly expanding interest of non-Chinese speakers in learning Chinese as a second language in the Chinese education system. For the Thai people, Chinese is becoming more and more popular. In Thailand, English and Chinese are integrated into all levels of education (Sirindhorn, 2018).

Although Chinese teaching has developed rapidly in Thailand, in recent years, students' Chinese learning motivation is unknown, teachers' grasp of students' Chinese learning motivation is not accurate enough, and other related problems have become one of the bottlenecks of Thai local students' Chinese learning (Zhong, 2018). Cai and Lynch (2017) believe that learning motivation, learning self-efficacy, and academic achievement play an important role in Chinese learning. Hambur (2018) mentioned that learning factors could be classified into two factors: modifiable factors and unmodifiable factors. The modifiable factors include learners' beliefs, learning strategies, and motivation, which can be improved through learners' effort; the unmodifiable factors contain aptitude, personality, intelligence, and learners' first language level, etc., which cannot be adjusted easily. Although the unmodifiable factors play vital roles in SLA, they cannot be changed or adjusted easily. Thus, more attention should be given to those modifiable factors. Individual differences also directly predict the motivation and self-efficacy of students (Hardré et al., 2015). However, studies on Thai students' motivation and self-efficacy in learning Chinese are rare. Most studies on motivation and self-efficacy have only focused on the effects of teaching methods, language anxiety, learning strategies, and learning beliefs. In contrast, few studies have focused on the effects of individual differences, especially gender, duration of Chinese learning, family, age, and Chinese proficiency level (Fallah, 2017; Lambert & Zhang, 2019; Sun & Wang, 2020; Wang et al., 2021; Zheng et al., 2019). Therefore, this study investigates Thai senior high school students' motivation and self-efficacy in learning Chinese and explores the relationship between individual differences and motivation and self-efficacy.

## Literature Review

Previous literature has conducted a wide range of studies on different targets and is divided into two parts in this section.

### Different perspective of motivation

SLA researchers believe motivation is crucial in L2 learning (e.g., Ellis, 1997; Kennedy & Chinokul, 2020; Ozer & Badem, 2022). People tend to think that the beginning of learning is likely due to learners' motivation (Eryilmaz & Yesilyurt; Williams & Burden, 2000). Motivation is considered an internal driving force, not an external one. A more generally accepted definition comes from Brow (2000), where motivation is the inner drive, emotion, impulse, or desire that prompts a person to perform a particular behavior. In addition, Williams and Burden (2000) divide motivation into three stages: 1) reasoning to do something, 2) decide to do something, 3) insist on doing something. The first two stages of this model are about starting motivation, while the last stage is about maintaining motivation. In more specialized expressions, motivation is the choices

people make about what experiences or goals they will approach or avoid and the degree of effort they will put into doing so (Keller, 1983). Although there are many different definitions of motivation, the main issues are based on three key points: why people decide to do something, how long they are willing to do it, and the level of effort they pursue (Dörnyei, 2002).

## **L2 motivational self-system (L2MSS)**

Dörnyei (2005) proposed the theory of the L2 motivational self-system and showed that the L2 motivational self-system is composed of three dimensions: ideal L2 self, ought-to L2 self, and L2 learning experience. The ideal L2 self refers to the part of the ideal self that relates to the L2 and is the aspirations and goals that learners want to achieve in their learning of the L2. If proficiency in the target language is the learner's ideal self, then the ideal L2 self will be a strong motivator for the learner to learn. This is because the individual has a vision of reducing or eliminating the inconsistency between the real and ideal selves. In the empirical study proposed by Dörnyei (2005), traditional integrative motivation and internalized instrumental motivation (elevated instrumental motivation) belong to this component. Ought-to L2 self refers to the attributes that learners believe they should have to meet the expectations of others or to avoid negative outcomes. Dörnyei (2005) found that extrinsic instrumental motivation (preventive instrumental motivation) was relevant to this concept. L2 learning experiences refer to factors related to the current learning environment and past experiences, such as the pleasantness of the language course, the influence of learning peers, and past successes (Dörnyei & Ushioda, 2013). Dörnyei et al. (2006) noted that some students with specific motivation generally show a strong interest in foreign language learning and that this international interest in learning produces a more mature and pronounced ideal bilingual self. Henry (2017) proposed the concept of the "ideal multilingual self," which refers to the learner's desire to be multilingual. Henry argued that this motivation can have great power and that the ideal multilingual self also enables the ideal bilingual and trilingual selves to coexist harmoniously, enhancing the identity of the multilingual person. Thompson & Erdil-Moody (2016) used the L2MSS to investigate language learning motivation and multilingualism states in the context of Turkish English as a foreign language. Analyzing data from 159 EFL learners in Turkey showed a significant group effect of multilingual status in the ideal second language self; however, no significant differences were found between the groups in the second language self.

Liu (2013) conducted an empirical study based on the self-system theory of second language motivation. The results confirmed several findings: 1) Ideal L2 self plays a more important role than integrative one. 2) Among L2 learners of different educational levels, the three components of the L2MSS play different roles: for higher-level L2 learners, the ideal L2 self plays a very important role; for lower-level L2 learners, the L2 learning experience is crucial.

Ge and Jin (2016) conducted an empirical study on undergraduate students based on the L2MSS. Their findings demonstrated that among the three factors, the ideal L2 self had the greatest influence on learners, the L2 learning experience the second, and the ought-to-self the least. The findings also point out that females had higher levels of ideal and should-self levels than males. Students' ideal self and L2 learning experience were positively correlated with English language achievement.

Teimouri (2017) used L2MSS as a theoretical framework to investigate the motivational status of English language learning among 524 EFL adolescent students. To examine the strengths of students' L2MSS in terms of prediction, multiple regression analysis was used. The ideal L2 self and ought-to L2 self were used as the independent variable, while pleasure, anxiety, and shame were used as the dependent variables. Students' ideal L2 self and ought-to L2 self were found to be predictors of their happy emotional state, with the ideal L2 self having the strongest effect. In contrast, the students' ought-to L2 can predict their predicted anxious emotional states.

Other researchers (Cao, 2018; Darling & Chanyoo, 2018; Papi, 2010; Prompakdee, 2021; Swatevacharkul, 2017) have also confirmed the importance of the LMSS for students' successful

language learning through correlational analyses, and even though there is debate as to which is more important: the ought-to L2 self or the second language learning experience, but it is undeniable that the ideal L2 self was found to be the most important part in foreign language learning.

### **Academic self-efficacy**

Academic self-efficacy is based on self-efficacy theory (Bandura, 1977) and is a manifestation of self-efficacy in the learning domain. Specifically, academic self-efficacy refers to an individual's belief that he or she can complete academic tasks or achieve specific goals at a specified level (Bandura, 1997; Schunk & Pajares, 2002). Self-efficacy is a task-specific assessment; thus, an individual's academic self-efficacy may vary with the task's difficulty. In other words, some students may have high academic self-efficacy even on difficult tasks, while others have high academic self-efficacy only on some easy tasks. Zimmerman (1989) stated that students with higher academic self-efficacy have better learning strategies and academic performance than students with lower academic self-efficacy. Pintrich and Schunk (2002) praised academic self-efficacy as essential in determining the learning process. After that, many other researchers studied the application of academic self-efficacy in academic activities.

In a study of 1146 secondary school students from different ethnic groups, including Malay, Chinese, and Indian, Malaysian, scholars found that students' English self-efficacy was somewhat positively correlated with English language achievement. The research on the differences in self-efficacy between ethnicity groups revealed that students of Indian ethnicity had significantly higher self-efficacy than the Chinese ethnicity and Malay ethnic groups. (Mahyuddin et al., 2006).

Chen (2020) conducted a questionnaire survey among male and female students in three grades, covering English listening, reading, and writing. The findings demonstrated that self-efficacy has an impact on environmental and behavioral choices; students with strong self-efficacy can use various cognitive and learning approaches flexibly and achieve good self-management and regulation; students with good English scores have high self-efficacy scores, which indicates a positive correlation between self-efficacy and English performance.

According to the review of previous literature, motivation and academic self-efficacy positively affect language learning. However, there needs to be more research on the relationship between motivation and academic self-efficacy in Chinese language learning and the relationship between individual differences and motivation and academic self-efficacy among Thai students.

This study aimed to address this research gap by answering the following three research questions:

RQ1: What is the level of Thai senior high school students' Chinese learning motivation and academic self-efficacy?

RQ2: Are there any differences in Thai senior high school students' Chinese learning motivation and academic self-efficacy related to their gender, duration of Chinese learning, age, ethnicity, and Chinese proficiency level?

RQ3: What are the relationships between Thai senior high school students' Chinese learning motivation and academic self-efficacy?

## **Methodology**

### **Research Design**

The researchers used a descriptive correlational research design. The study aimed to investigate Thai high school students' motivation and self-efficacy levels in Chinese language learning and their relationships, as well as the relationship between individual differences and motivation and academic self-efficacy. Questionnaires were used as quantitative data mainly to measure the level of motivation and self-efficacy, the relationship between individual differences and motivation and self-efficacy, and the relationship between motivation and self-efficacy.

## Population and Sample

The population of this research consisted of 179 students from seven classes in grades 10-12 from a School in Trang. The sample size was calculated according to the Taro Yamane formula. The existing target population is 179, and the sample size calculation formula is  $n = \frac{N}{1 + Ne^2} = \frac{179}{1 + 179 \times 0.05^2} \approx 123$ . In this study, 123 research samples were selected by random sampling according to the list of the students.

From a demographic perspective, fifty-three participants were male (43.09%), and seventy respondents were female (56.91%). Forty-three students were aged 15-16 (34.96%), fifty-three students were aged 17-18 (43.09%), and twenty-seven students were aged 18 or older (21.95%). Twenty-four students were ethnic Chinese Thai (born in Thailand with Thai nationality but retaining Chinese customs) (19.51%), and ninety-nine students were Thai (80.49%). In the item of the duration of Chinese learning, most participants had studied Chinese for more than one year, with a total of twenty-eight (22.76%) students having studied Chinese for 1-2 years and a total of sixty-six (53.66%) having studied for more than two years. Only a small number of participants had studied Chinese for less than one year, with twenty-two participants having studied Chinese for 0-6 months (17.89%) and seven participants having studied Chinese for 7-11 months (5.69%). The distribution of students' Chinese proficiency level (Chinese test scores from the previous semester, including listening, speaking, reading, and writing.) is as follows: six students scored below 60 (4.88%), forty-four students scored 60-74 (35.77%), forty-nine students scored 75-89 (39.84%), and twenty-four students scored 90-100 (19.51%) on the Chinese test.

## Research Instruments

The motivation questionnaire was adapted from Subekti's (2018) questionnaire on the L2 Motivational Self System and L2 achievement: A study of Indonesian EAP learners. Since the original motivation questionnaire is in English, a translation-back translation approach was taken to the translation of the questionnaire. First, the researchers translated the original questionnaire into Thai and Chinese. Two linguistic experts from the Chinese department at a public university in Thailand were invited to evaluate the questionnaire and translated into English by an expert who was proficient in Thai, Chinese, and English. The researcher compared the back-translated version with the original English questionnaire; only item 18 was consistent with less than 90% of the original. After re-translation and back-translation, the final requirement of 90% consistency was achieved. According to the evaluation rate of the three experts, the questionnaire was revised again, and the final questionnaire was formed.

The questionnaire on academic self-efficacy adopted the questionnaire of Shi (2021)'s questionnaire on Chinese Learning Motivation and Learning Efficacy of students in the Chinese Vocational Education Class at China-Laos Friendship School in Laos.

The questionnaire was divided into three parts. The first part is the basic information, including the respondents' gender, age, ethnicity, duration of Chinese learning, and their Chinese proficiency level (Chinese test scores). The second part was the motivation in Chinese language learning, which included 18 items, and the third part was the self-efficacy in Chinese language learning, which included 16 items. The questionnaire used Likert's five-degree scale to allow the respondents to choose their level of agreement on their motivation in learning Chinese and their self-efficacy in learning Chinese.

In the learning motivation scale, items 1, 2, 3, 4, 5, 6 are categorized as ideal L2 self, items 7, 8, 9, 10, 11, 12 are categorized as ought-to L2 self, and items 13, 14, 15, 16, 17, 18 are categorized as L2 learning experience. In the academic self-efficacy scale, items 1, 2, 3, 4, 5, 6, 7, 12, 13, 14, 15, 16 are categorized as learning ability, items 8, 9, 10, 11 are categorized as a locus of control. Furthermore, according to the comments of experts in IOC, the items of the questionnaire in this study were not mixed.

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## Validity and Reliability

The content validity was performed by inviting two Thai experts and one Chinese expert. IOC (Item Objective Congruence) was used to assess the correspondence of projects to objectives based on scores +1, 0, and -1. The questionnaire was used in the quantitative research after a Chinese expert and two Thai experts ensured the validity of the research instrument through a detailed review of content coverage, relevance, linguistic accuracy, applicability, feedback, and recommendations. Before conducting a formal questionnaire of 123 students, the researcher conducted a reliability test with the pilot group to ensure the reliability of the motivation and self-efficacy questionnaire. The Cronbach's alpha coefficient is applied to test this study's reliability. The results showed that the motivation and self-efficacy scales were at an excellent level, with scores of 0.928 and 0.921, respectively.

## Data Collection

The researchers administered the questionnaire to 123 respondents. The director approved all research activities of the Chinese language teaching department of the school in Trang province. The researchers also received approval documents from the school's director of the Chinese language teaching department.

The questionnaire was prepared in both Chinese and Thai languages, and the Thai translation accuracy was checked using the back translation method. Before the students answered the questionnaire, the researcher used about 10 minutes to give some necessary instructions to get more valid answers. This time was given so the students could ask questions and ensure they completely understood the questionnaire's content. Half an hour was given to the students to complete the questionnaires. They were required to answer all the questions honestly and accurately. Their answers were kept a secret. The three sections included basic information, a motivation questionnaire, and a self-efficacy questionnaire.

## Ethical Consideration

The researchers were committed to obtaining each participant's consent and approval before the study; participants were informed of the study's purpose and the overall process. They were explained that the research data and their opinions were presented as anonymous. The data were kept confidential and used only for this study and not for any other purpose. The ethical research was approved by the Research Ethics Review Board of Rangsit University (COA. No: RSUERB2022-092).

## Data Analysis

Data analyses were conducted by using SPSS27 for quantitative analysis. After collating the data, the maximum, minimum, mean, standard deviation, and variance were calculated and subjected to an independent t-test, one-way ANOVA, Pearson correlation analysis, and content analysis to reveal motivation and self-efficacy levels; each variable was included in the calculation of the effect on the subjects' motivation and self-efficacy to reveal the relationship between gender, age, ethnicity, duration of Chinese learning, Chinese proficiency level and the learners' motivation and self-efficacy in learning Chinese. To quantify the motivation and self-efficacy levels of the students, the researcher set criteria to interpret the level of motivation and self-efficacy similar to that of Wangdi (2019). The following criteria were to interpret the mean scores of motivations and self-efficacy:

4.50 - 5.00 = highest level motivation and self-efficacy

3.50 - 4.49 = High level motivation and self-efficacy

2.50 - 3.49 = moderate level motivation and self-efficacy

1.50 - 2.49 = low level motivation and self-efficacy

1.00 - 1.49 = lowest level motivation and self-efficacy

The score for each item indicates the student's perceived level. The higher the score, the higher the student's level of motivation and self-efficacy, while the lower the score, the lower the student's level of motivation and self-efficacy.

## Results

### Response to Research Question 1

**Table 1**

*Descriptive Statistics of high school Students' Motivation in Chinese Learning*

	Item	Max	Min	Mean	SD	Var	Mean of 6 items
Ideal L2 self	Q1	5	1	2.561	0.942	0.888	2.621
	Q2	5	1	2.569	0.95	0.903	
	Q3	5	1	2.992	0.996	0.992	
	Q4	5	1	2.756	1.027	1.055	
	Q5	5	1	2.691	0.985	0.969	
	Q6	5	1	2.154	0.95	0.902	
Ought-to L2 self	Q7	5	1	2.740	1.047	1.096	2.489
	Q8	5	1	2.301	0.958	0.917	
	Q9	5	1	2.488	0.970	0.940	
	Q10	5	1	2.699	1.138	1.294	
	Q11	5	1	2.000	0.800	0.639	
	Q12	5	1	2.707	1.084	1.176	
L2 learning experience	Q13	5	1	2.138	0.782	0.612	2.150
	Q14	5	1	2.033	0.757	0.537	
	Q15	5	1	2.220	0.845	0.714	
	Q16	4	1	2.285	0.784	0.615	
	Q17	5	1	2.000	0.701	0.492	
	Q18	5	1	2.228	0.885	0.784	
Average mean score	Q1-Q18			2.420			

Table 1 shows a descriptive statistical analysis of students' motivation. The mean value of students' motivation was  $M=2.42$ . Based on the criteria set up for this study, the student's motivation level was moderate. The mean value of the ideal L2 self was 2.621. The level of the ideal L2 was at a moderate level based on the agreed criteria. The mean value of ought-to L2 self was 2.489. The level of ought-to L2 self was at a low level based on the agreed criteria. The mean value of the L2 learning experience was 2.150. The level of L2 learning experience was at a low level based on the agreed criteria.

Based on the data analysis, research question 1 can be answered. The results reveal that high school students have a moderate level of motivation in Chinese language learning. In terms of the student's L2MSS, the learning motivation category with the highest mean was Ideal L2 self, followed by ought-to L2 self and L2 learning experience.

**Table 2***Descriptive Statistics of high school Students' academic self-efficacy*

	Item	N	Max	Min	Mean	SD	Md
Academic self-efficacy	Q1-Q16	123	3.938	1.563	2.639	0.432	2.625
Learning ability	Q1-Q7 Q12-16	123	4.417	1.000	2.526	0.648	2.500
Locus of control	Q8-Q11	123	4.000	1.500	2.978	0.537	3.00

Table 2 shows the descriptive statistics of self-efficacy. Based on the agreed criteria, the participants' academic self-efficacy level was moderate, with a mean score of 2.639. Of the two dimensions of self-efficacy, locus of control was the highest ( $M = 2.978$ ,  $SD = 0.537$ ). Sense of learning ability ( $M=2.526$ ,  $SD=0.648$ ) was at a low level. Based on the results of research question 1, Thai high school students have a moderate level of academic self-efficacy in Chinese learning.

### Response to Research Question 2

**Table 3***Independent Samples Test of the Two Groups' Scores on learning motivation and academic self-efficacy related to gender*

	N	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning motivation	123	.387	.09811	.11294
Academic self-efficacy	123	.140	.11680	.07856

Table 3 shows the significant value of learning motivation and gender was 0.39 ( $0.39 > 0.05$ ). As a result, there is no significant difference between learning motivation and gender. Regarding self-efficacy, the significance value of self-efficacy and gender was 0.14 ( $0.14 > 0.05$ ). Therefore, there was also no statistically significant difference between self-efficacy and gender.

**Table 4***The Differences of Participants' learning motivation and academic self-efficacy related to age*

		Sum of Squares	df	Mean Square	F	Sig.
Learning motivation	Between Groups	3.022	2	1.511	4.139	.018
	Within Groups	43.818	120	.365		
	Total	46.840	120			
Academic Self-efficacy	Between Groups	3.502	2	1.751	10.813	.000
	Within Groups	19.432	120	.162		
	Total	22.934	122			

Table 4 indicates the results of the one-way ANOVA that there was a statistically significant difference between these three groups ( $F=4.139$ ,  $Sig.=0.018 < 0.05$ ). In addition, the  $F$  (10.813) and  $Sig.$  value (0.000) for self-efficacy also indicated that there was a significant difference



between these three groups. A bivariate correlation analysis was applied to validate further the correlation between age, motivation, and self-efficacy.

**Table 5**

*Bivariate correlation analysis between age and learning motivation*

		Learning motivation	Age
Learning motivation	Pearson correlation	1	-.246**
	Sig.(2-tailed)		.006
	N	123	123
Age	Pearson correlation	-.246**	1
	Sig.(2-tailed)	.006	
	N	123	123

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 6**

*Bivariate correlation analysis between age and academic self-efficacy*

		Academic Self-efficacy	Age
Academic Self-efficacy	Pearson correlation	1	-.390**
	Sig.(2-tailed)		.000
	N	123	123
Age	Pearson correlation	-.390**	1
	Sig.(2-tailed)	.000	
	N	123	123

\*\* Correlation is significant at the 0.01 level (2-tailed).

Tables 5 and 6 show that the correlation coefficient between age and motivation was -0.246. A statistical significance was found at the 0.01 level, thus indicating a statistically significant negative correlation between age, and learning motivation, meaning that Chinese learning motivation decreased as students grew older. Besides, the Pearson correlation coefficient between age and self-efficacy was -0.390, and a statistical significance was found at the 0.01 level, thus indicating that there is a statistically significant negative correlation between age and self-efficacy, which means that self-efficacy in Chinese learning decreases as students grow older.

**Table 7**

*Independent Samples Test of the Two Groups' Scores on learning motivation and academic self-efficacy related to ethnic*

	N	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning motivation	123	.879	.02168	.14155
Academic self-efficacy	123	.217	.12208	.09843

Table 7 reflects that there was no statistically significant difference in the learning motivation of ethnic Chinese Thai and Thai participants (Sig. value=0.88>0.05). In terms of self-efficacy, the difference between ethnic Chinese Thai and Thai participants was above the

statistically significant level (Sig. value=0.22>0.05). Therefore, there was also no statistically significant difference in self-efficacy.

**Table 8**

*The Differences of Participants' learning motivation and academic self-efficacy related to Chinese proficiency level*

		Sum of Squares	df	Mean Square	F	Sig.
Learning motivation	Between Groups	10.563	3	3.521	11.551	.000
	Within Groups	36.277	119	.305		
	Total	46.840	122			
Academic Self-efficacy	Between Groups	2.975	3	.992	5.914	.001
	Within Groups	19.958	119	.168		
	Total	22.934	122			

Table 8 shows the results of the one-way ANOVA, a statistically significant learning motivation difference between Groups with different Chinese proficiency level ( $F=11.551$ , Sig. value=0.000<0.05). In addition,  $F$  (5.914) and Sig. value (0.001) of academic self-efficacy also indicates a statistically significant difference in self-efficacy between these four levels. A bivariate correlation analysis was applied to validate further the correlation between Chinese proficiency level, motivation, and self-efficacy.

**Table 9**

*Bivariate correlation analysis between Chinese proficiency level and learning motivation*

		Learning motivation	Chinese proficiency level
Learning motivation	Pearson correlation	1	.431**
	Sig.(2-tailed)		.000
	N	123	123
Chinese proficiency level	Pearson correlation	.431**	1
	Sig.(2-tailed)	.000	
	N	123	123

\*\* Correlation is significant at the 0.01 level (2-tailed).

**Table 10**

*Bivariate correlation analysis between Chinese proficiency level and academic self-efficacy*

		Academic Self-efficacy	Chinese proficiency level
Academic Self-efficacy	Pearson correlation	1	.340**
	Sig.(2-tailed)		.000
	N	123	123
Chinese proficiency level	Pearson correlation	.340**	1
	Sig.(2-tailed)	.000	
	N	123	123

\*\* Correlation is significant at the 0.01 level (2-tailed).

Tables 9 and 10 show the correlation coefficient between Chinese language proficiency level and motivation was 0.431, which was statistically significant at the 0.01 level, indicating that there was a statistically significant positive correlation between Chinese language proficiency level and motivation, which implies that students with higher Chinese language proficiency level have a higher level of motivation. In addition, the correlation coefficient between Chinese proficiency level and self-efficacy was 0.340, which was significant at the 0.01 level, indicating that there was a statistically significant positive correlation between Chinese proficiency level and self-efficacy, meaning that students with higher Chinese proficiency level have a higher level of self-efficacy.

### Response to Research Question 3

**Table 11**

*Bivariate correlation analysis between learning motivation and academic self-efficacy*

		Learning motivation	Academic Self-efficacy
Learning motivation	Pearson correlation	1	.793**
	Sig. (2-tailed)		.000
	N	123	123
Academic Self-efficacy	Pearson correlation	.793**	1
	Sig. (2-tailed)	.000	
	N	123	123

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 11 displays the correlation between participants' motivation and self-efficacy was statistically and positively correlated at the 0.01 level, with a correlation coefficient of 0.793. Therefore, it is possible to conclude that the participants with a higher level of learning motivation simultaneously had a higher level of self-efficacy. Meanwhile, higher self-efficacy gave them a stronger motivation to learn Chinese.

**Table 12**

*ANOVA<sup>a</sup> of the linear regression analysis between learning motivation and academic self-efficacy*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	29.483	1	29.483	205.524	.000 <sup>b</sup>
Residual	17.358	121	.143		
Total	46.840	122			

a. Dependent Variable: Learning motivation

b. Predictors: (Constant), Academic self-efficacy

**Table 13***Coefficients<sup>a</sup> of the linear regression analysis between learning motivation and academic self-efficacy*

Model	Unstandardized		Standardized	t	Sig.	
	Coefficients		Coefficients			
	B	Std. Error	Beta			
1	(Constant)	-.572	.211		-2.704	.008
	Academic self-efficacy	1.134	.079	.793	14.336	.000

a. Dependent Variable: Learning motivation

Table 12 shows that there is a statistically significant  $p=0.000<0.05$ , which is the same as a result obtained from the correlation analysis. The F-value was 205.524, which means that the model from this regression analysis is statistically significant. The result in Table 13 shows that  $b=1.134$  with a constant of  $-.572$ , and the regression equation from this model analysis is Chinese language motivation =  $-.572 + 1.134 * \text{academic Self-efficacy}$ . Table 13 shows a non-zero t-value, indicating that there is indeed an effect of academic self-efficacy on Chinese learning motivation among the students.

### Discussion

Through the quantitative analysis of the questionnaire combined, three research questions have been answered. High school students in the local school of Trang province had a moderate level of motivation and self-efficacy in learning Chinese. In terms of L2MSS, the learning motivation category with the highest mean was the ideal L2 self, followed by ought-to L2 self and L2 learning experience. High school students' Chinese language learning motivation level and self-efficacy level in the local school of Trang province had a negative correlation with age and a positive correlation with Chinese proficiency level, while there was no correlation with gender, ethnicity, or duration of Chinese learning. There is a positive correlation between motivation and self-efficacy in Chinese language learning among high school students in the local school of Trang province.

The results showed that Thai high school students had a low level of motivation in learning Chinese from the L2MSS perspective ( $\bar{x} = 2.420$ ). For the L2MSS, the results of the study were consistent with previous findings that the ideal L2 self is at the forefront of L2MSS (Cao, 2018; Darling & Chanyoo, 2018; Liu, 2010; Papi, 2010; Prompakdee, 2021; Swatevacharkul, 2017). The results that the ideal L2 self has a greater impact than the ought-to L2 self also confirm some arguments that in learning motivation theory, the more self-internal motivation learners have, the stronger motivation in L2 learning they will have (Noels et al., 2000). Furthermore, the results of the current study are in congruence with Öz (2016), where the ideal second language self has a more important impact on establishing and maintaining connections with foreigners, which may transform into higher motivation and higher levels of second language achievement. The self-efficacy level was found at the moderate level ( $\bar{x} = 2.639$ ). The locus of control was the highest of the two self-efficacy items ( $\bar{x} = 2.978$ ). Learning ability ( $\bar{x} = 2.500$ ) was at a low level. Some earlier studies also support the results (Li, 2015; Qin, 2020). Shi's (2018) study on Lao students' Chinese learning efficacy showed that the sense of Chinese learning efficacy was at a moderate level and that Lao students' sense of basic Chinese competence was higher than their sense of control. The results of this thesis are inconsistent with Shi's (2018) study, which showed that participants' locus of control was greater than their learning ability. The reason may be that the participants in Shi's (2018) study were Chinese majors with high Chinese language proficiency, while the participants in this study were high school students, some of whom had only started learning Chinese a few months.

Learning motivation and self-efficacy were statistically significantly correlated with students' age and Chinese language proficiency. Regarding the study of self-efficacy, the results of the present study are consistent with Zhao's (2012) study that there is a significant difference in self-efficacy among students in different age groups. The results of this study are similar to Liu's (2020) empirical study on the motivation of non-English major college students. Liu (2020) found statistically significant differences in self-efficacy between low and intermediate achievement, low and high achievement, and high and intermediate achievement. The result that motivation is proportional to the level of Chinese language proficiency also confirms some arguments in the theory of learning motivation, learners with higher motivation were more likely to succeed in second language learning than those with lower motivation (Gardner & Lambert, 1972).

Learning motivation and self-efficacy were not statistically significantly correlated with gender, ethnicity, and duration of Chinese learning. Indeed, some conflicting results are so far from some studies on gender differences in motivation and self-efficacy. In studies by Ryan (2009) and Henry & Cliffordson (2013), the female had stronger visions of themselves as successful language users than their male counterparts. This finding is explained by the fact that females are more likely than males to construct an independent self, which enhances interactions with others. However, a considerable number of studies have not found gender differences in the motivation and self-efficacy of second language learners (Henry & Cliffordson, 2013; Sylven & Thompson, 2015; Thompson & Erdil-Moody, 2014). The ethnicity results are inconsistent with Chu's study (2019), which found that ethnic Chinese Malaysian students had a higher level of internal motivation, integrative motivation, instrumental motivation, and self-efficacy than non-ethnic Chinese students. This is because Chu's study (2019) was conducted with Malaysian students. Since Malaysia has been independent, ethnic Chinese in Malaysia have always insisted on Chinese language education. The interest in learning the Chinese language and interest in Chinese culture of ethnic Chinese is significantly higher than non-ethnic Chinese. While the integration of ethnic Chinese into mainstream Thai society was very smooth, many Chinese immigrants stopped speaking Chinese from the second generation onwards, in addition to Thailand's previous language policy, which also led to a lower level in the identity of Chinese language and Chinese culture among ethnic Chinese in Thailand than ethnic Chinese in other countries (Yang & Yang, 2017). The findings on the duration of Chinese learning were consistent with Gao's (2019) and Shi's (2018) results that there is no statistically significant correlation between learning motivation, self-efficacy, and duration of learning. Gao's (2019) study found no statistically significant differences in motivation and self-efficacy levels among English second language learners with different duration of learning. In the study of Chinese as a second language, Shi (2018) conducted a study on the motivation and self-efficacy of Lao Chinese learners. The study results showed some decrease in the motivation of Lao Chinese learners as the duration of learning increased, but it still could not be counted as a significant difference.

The results showed a statistically positive correlation between learning motivation and self-efficacy ( $PCC=0.793$ ). This finding is supported by many previous studies (Cao, 2018; Ersanlı, 2015; Hadi et al., 2014; Hassankhani, 2014; Liu, 2010; Torres & Alieto, 2019). The current findings are also supported by Bandura (1997). The level of self-efficacy enhances and weakens an individual's motivation, which affects action. Correspondingly, academic self-efficacy can influence individual motivation to learn. Although motivation does not directly affect learning as much as variables such as students' intelligence level, cognitive structural characteristics, and cognitive development level, it has a significant impact on cognitive activity and its outcome indirectly due to its motivational characteristics. This is how self-efficacy can influence students' learning outcomes. Thus, a high level of self-efficacy is important for learning, and teachers must help students develop a high level of self-efficacy.

### Recommendations and limitations

Based on the results, the school administrators shall seek methods to motivate students to learn Chinese and provide relevant policies and guarantees. For example, scholarships for students with excellent Chinese language learning performance and students with good Chinese language performance in their senior year being sent to study at a university in China. Furthermore, Thai Chinese teachers should be aware of students' Chinese language level and psychological needs, establish a relaxed classroom atmosphere and help students build self-confidence. Chinese native teachers should improve their Thai language skills to interact more with students and choose appropriate teaching methods to enhance students' motivation to learn Chinese. Students can set learning milestones for themselves. For example, to achieve a set score on a Chinese language test. Students will also have a sense of accomplishment after completing a stage of goals, and these feelings of accomplishment also give students greater motivation to learn Chinese. In addition, parents should pay more attention to their children's learning, encourage them more and reward them when they achieve the desired learning outcomes.

The study was limited to Chinese teaching in Trang province of Thailand. Future studies can be conducted in other places. This study only investigated the level of motivation and self-efficacy in Chinese language learning of Thai high school students and their relationship with individual differences. Future research can use an experimental method to explore teaching methods that improve students' motivation and self-efficacy. Only five variables were investigated in this study for the effect of individual differences on motivation and self-efficacy. Future research may investigate more variables that affect Chinese learning motivation and self-efficacy, such as family income, learning environment, personality, intelligence, and attitude toward learning.

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