THE RELATIONSHIP OF SELF-EFFICACY FOR AND USE OF METACOGNITIVE STRATEGIES IN LEARNING CHINESE AS A FOREIGN LANGUAGE WITH CHINESE ACADEMIC ACHIEVEMENT OF YEAR 5 STUDENTS AT AN INTERNATIONAL SCHOOL IN THAILAND*

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Abstract

This study was aimed to determine whether there was a significant relationship of self-efficacy for and use of metacognitive strategies in learning Chinese as a foreign language (CFL) with Chinese academic achievement held by Year 5 students at a target international school in Thailand. A conveniently chosen sample of 70 students, enrolled in the target school during the academic year 2021-2022, participated in this study. For the data collection, Wang et al.'s (2013) Questionnaire of Chinese Self-Efficacy (QCSE), Oxford's (1990) Strategy Inventory of Language Learning (SILL): Use of Metacognitive Strategies, and the participants' Chinese subject's placement test, were used. From performing descriptive statistics on the collected data, it was found that the participants' overall level of self-efficacy for learning CFL was slightly high. The level of the use of metacognitive strategies in learning CFL held by the participants at the target school was moderately high. The overall level of the participants' academic achievement in Chinese language class was interpreted as good. From a correlational analysis, it was found that the combination of the participants' self-efficacy for learning CFL and use of metacognitive strategies in learning CFL had a significant and moderately strong correlation with their Chinese academic achievement, which accounted for 18% of its variance. Based on the research findings, recommendations for administrators, teachers, students, and future researchers are provided.

Keywords: Self-Efficacy, Language Learning Strategies, Metacognitive Strategies, Academic Achievement, Chinese Language Education

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Introduction

In this globalized era, multilingualism (i.e., the ability to communicate proficiently in at least two languages) has become important for mutual understanding and as a medium of communication among people. Due to the rise of China in the world stage in the last decades, which has influenced the world both economically and politically, people around the world are learning Chinese so that they can keep up and grow with the development of China. The "Mandarin fever" has increased globally and learning Chinese as a foreign language (CFL) has also become a trend in Thailand. According to data from the Office of the Basic Education Commission of Thailand, there were more than 700 schools in Thailand providing CFL courses to their elementary, middle and high school students by 2008. (Masuntisuk, 2013).

Self-efficacy, which refers to people's belief about their abilities to complete or perform a certain task successfully (Bandura, 1986, 1997), is known to be a prominent factor that impacts and predicts the acquisition of second/foreign language (L2). In the process of learning, when learners have a high level of self-efficacy, they will tend to perform better because they will put more effort and be more persistent on the given task than when they have a low level of self-efficacy. In a L2 learning context, self-efficacy has been found to be a significant predictor of learners' academic achievement. (e.g., Kitikanan & Sasimonton, 2017; Klomegah, 2007; Raoofi et al., 2012; Tilfarlioğlu & Ciftici, 2011)

Metacognition, or the use of metacognitive strategies, is also an essential factor in language learning strategies that has been reported to have a significant impact on learners' success in L2 learning (e.g., Kummin & Rahman, 2010; Oxford, 1990; Raoofi et al., 2013; Wang et al., 2009). Metacognition is the awareness and management of one's own thinking process, and hence the reflection on one's own thinking (Chick, 2013). When learners use metacognitive strategies in learning, they would plan and monitor their learning progress and evaluate the results for improvements and better their academic achievement (Oxford, 1990). In the context of L2 learning, many studies have reported that the use of metacognitive strategies has a positive relationship with learners' academic achievement. (e.g., Kummin & Rahman, 2010; Raoofi et al., 2013; Wang et al., 2009)

At the target international school in Thailand, the first author has observed that the Year 5 students learn Chinese daily for many years, but sometimes they seem not confident enough in their ability to speak up in the Chinese class, read out loud the Chinese passages, or write Chinese characters on the whiteboard when the teacher asks them to, because they seem to doubt about whether they are able to perform well. These are indicators of possibly having a low level of self-efficacy for learning CFL. Moreover, metacognition is one of the main sub-skills that the target school has been teaching the students to develop their ability o learn how to learn. However, the first author has observed that some students seem not to plan,

monitor, or evaluate their Chinese learning, because it seems that these students learn the Chinese vocabulary through memorization and tend to forget not long after having a quiz, test, or examination on those contents. This is an indicator that possibly students have a low use of metacognitive strategies in learning CFL. Conversely, the first author has observed students who are confident to participate more in class and ask teachers about their mistakes in work and how to improve them, seem to have a higher academic achievement in their Chinese assessment tasks.

For these aforementioned reasons, the researchers decided to conduct an empirical study in order to examine the relationship of self-efficacy for learning Chinese, use of metacognitive strategies in learning Chinese, and Chinese academic achievement of Year 5 students at the target international school in Thailand.

Objectives of this Research

The following were the specific research objectives addressed in this study.

1. To determine the level of self-efficacy for learning Chinese as a foreign language of Year 5 students at an international school in Thailand.

2. To determine the level of the use of metacognitive strategies in learning Chinese as a foreign language of Year 5 students at an international school in Thailand.

3. To determine the level of Chinese academic achievement of Year 5 students at an international school in Thailand.

4. To determine whether there is a significant relationship of self-efficacy for and use of metacognitive strategies in learning Chinese as a foreign language with Chinese academic achievement of Year 5 students at an international school in Thailand.

Research Methodology

In this section, the research design, population and sample, research tools, data collection, data analysis, ethical considerations and the research validity are described in detail.

1. Research Design

The purpose of this research was to identify whether there was a significant relationship between of self-efficacy for and use of metacognitive strategies in learning Chinese as a foreign language with the Chinese academic achievement of the Year 5 students at an international school in Thailand. For this purpose, a quantitative correlational research design was used to examine the relationship among the research variables.

2. Population and Sample

The study employed a population sample of all the 70 Year 5 students who were

enrolled in the Chinese language class in the academic year of 2021-2022 at an international school in Thailand. The participants were 70 Year 5 students from four classes (i.e., 17 students from Class 1; 18 students from Class 2; 17 students from Class 3; and 18 students from Class 4).

3. Research Tools

For this study, the researchers used the Questionnaire of Chinese Self-Efficacy (QCSE), Strategy Inventory of Language Learning (SILL): Use of Metacognitive Strategies, and the Chinese Placement Test for the academic year 2021-2022.

3.1 Questionnaire of Chinese Self-Efficacy (QCSE). In order to measure the participants' level of self-efficacy for learning CFL, the researchers administered the Questionnaire of Chinese Self-Efficacy (QCSE; see Table 1), adopted from Wang et al. (2013), which consisted of 32 items covering the four language learning skills (i.e., listening, reading, speaking, and writing). In relation to the statement of each item, the participants were asked to rate their self-efficacy level on a 7-point Likert-type scale from 1 (I am totally unable to do this) to 7 (I am totally able to do this). The mean scores from the Likert scale ratings were interpreted using a continuum from "very low self-efficacy" to "very high self-efficacy".

Table 1 Items in the Questionnaire for Chinese Self-Efficacy (QCSE)

Item No.	Item statement
	Self-efficacy for listening
1	Can you understand stories told in Chinese?
3	Can you understand Chinese TV programs in Chinese?
9	Can you understand radio programs in Chinese?
10	Can you understand Chinese -language TV programs?
15	Can you understand Chinese dialogue in audio recordings about everyday school matters?
22	Can you understand Chinese films without subtitles?
24	Can you understand Chinese songs?
27	Can you understand telephone numbers spoken in Chinese?
	Self-efficacy for speaking
4	Can you describe your school to other people in Chinese?
6	Can you describe the way to the school from the place where you live in Chinese?
8	Can you tell a story in Chinese?
17	Can you ask your teacher questions in Chinese?
19	Can you introduce your teacher to someone in Chinese?
20	Can you discuss subjects of general interest with your fellow students in Chinese?
23	Can you answer your teacher's questions in Chinese?
30	Can you introduce yourself in Chinese?
	Self-efficacy for reading
2	Can you do homework/home assignments alone when they include reading Chinese texts?
12	Can you guess the meaning of unknown words when you are reading a Chinese text?
16	Can you understand messages or news in Chinese on the websites approved by the school?
21	Can you read short Chinese narratives?
25	Can you read Chinese language newspapers?
26	Can you find out the meanings of new Chinese words using a monolingual dictionary?

29	Can you understand Chinese articles about Thai culture?
32	Can you understand new reading materials (e.g., news from the Chinese magazine) selected by your teacher?
	Self-efficacy for writing
5	Can you compose messages in Chinese on any of the online applications approved by the school?
7	Can you write a text in Chinese?
11	Can you leave a note for another student in Chinese?
13	Can you form new sentences from words you have just learned in Chinese?
14	Can you write e-mails in Chinese?
18	Can you produce Chinese sentences with idiomatic phrases?
28	Can you write diary entries in Chinese?
31	Can you write an essay in two pages about your teachers in Chinese?

3.2 Strategy Inventory of Language Learning (SILL): Use of Metacognitive Strategies. In order to measure the participants' level of their use of metacognitive strategies in learning CFL, the researchers administered the nine items of the metacognitive strategies subscale from the SILL (see Table 2), which were adopted from Oxford (1990). The target students were asked to rate their use of metacognitive strategies level on a 5-point Likert-type scale from 1 (never or almost never true to me) to 5 (always or almost always true to me). The mean scores from the Likert-type scale ratings were interpreted using a continuum from "low use of metacognitive strategies" to "high use of metacognitive strategies".

Table 2 Items in the Strategy Inventory of Language Learning (SILL): Use of Metacognitive Strategies

Item No.	Item statement
1	I try to find as many ways as I can to use my Chinese
2	I notice my Chinese mistakes and use that information to help me do better
3	I pay attention when someone is speaking Chinese
4	I try to find out how to be a better learner of Chinese
5	I plan my schedule so I will have enough time to study Chinese
6	I look for people I can talk to in Chinese
7	I look for opportunities to read as much as possible in Chinese
8	I have clear goals for improving my Chinese skills
9	I think about my progress in learning Chinese

3.3 Chinese Placement Test. As for measuring the participants' Chinese academic achievement, the scores from Year 5 students' Chinese Placement Test in March 2022 in the second semester of the academic year 2021-2022 were used. The test was prepared by the Year 5 Chinese teachers and middle school level Chinese teachers at the target school. The test included 20 multiple choice questions, 10 cloze items, 20 write the Chinese characters, 5 sentences arrangement, and 10 reading comprehension questions. The test was designed to determine students' Chinese knowledge and proficiency for the purpose

to allocate them into the appropriate Chinese phase classes when they enter middle school. The scores were interpreted as follows: excellent (95-108); good (76-94); satisfactory (54-75); and need for improvement (0-53).

4. Data Collection

The data were collected from the target group as follows:

4.1 In March 2022, the researchers administered to the participants, in person, the Questionnaire for Chinese Self-Efficacy (QCSE) and the Strategy Inventory of Language Learning (SILL): Use of Metacognitive Strategies. The response rate from the participants was 100%.

4.2 In May 2022, the scores from the Chinese Placement Test of the target students were collected by the researchers.

5. Data Analysis

The quantitative data collected from the QCSE, SILL: Use of Metacognitive Strategies, and Chinese Placement Test of the Year 5 students were analyzed by performing descriptive statistics (frequencies, percentages, means and standard deviations) and correlational analysis (using multiple correlational coefficient), with the support of a statistical software package.

6. Ethical Considerations

Before conducting the study, the researchers informed all the participants that their participation was not going to affect their grades. Moreover, the participants were informed that the research results were going to be used primarily for the purpose of the study, and all their identities were going to be kept confidential. For the sake of school confidentiality, the school's name was going to be left out from any document reporting the study findings.

7. Research Validity

Based on the validity reported by previous research (e.g., for the QCSE: Li, 2019; Wang et al., 2013; Yu et al., 2017; for the SILL: Use of Metacognitive Strategies: Lai, 2009; Oxford & Burry-Stock, 1995), these well-known instruments were selected for the measurement of the level of students' self-efficacy for and use of metacognitive strategies in learning CFL. The validity of the Chinese Placement Test was established by Year 5 Chinese teacher teachers and middle school level Chinese teachers, whom are experts in this field with at least 10 year of Chinese teaching experience and approval by the Chinese head of department and the programme coordinators of the primary and middle years.

Research Results

The main findings that emerged from this study are presented in detail, organized by research objectives.

1. Findings from Research Objective 1.

Table 3 shows the overall mean scores, standard deviations and interpretations of the level of self-efficacy for learning CFL, and its subscales, held by the Year 5 students at an international school in Thailand, who participated in this study.

Table 3 Mean Scores, Standard Deviations, and Interpretations for the Self-Efficacy for Learning CFL Held by Year 5 Students at an International School in Thailand

Variable	M	SD	Interpretation
Self-efficacy for learning CFL	5.25	1.52	Slightly high
Listening self-efficacy for learning CFL	4.81	1.68	Slightly high
Speaking self-efficacy for learning CFL	5.80	1.32	Moderately high
Reading self-efficacy for learning CFL	4.87	1.59	Slightly high
Writing self-efficacy for learning CFL	5.53	1.47	Moderately high

2. Findings from Research Objective 2.

Table 4 shows the overall mean scores, standard deviations and interpretations of the level of the use of metacognitive strategies in learning CFL held by the Year 5 students at an international school in Thailand, who participated in this study.

Table 4 Mean Scores, Standard Deviations, and Interpretations for the SILL: Use of Metacognitive Strategies in Learning CFL Held by Year 5 Students at an International School in Thailand

Item No.	Item statement	M	SD	Interpretation
1	I try to find as many ways as I can to use my Chinese	3.73	1.12	Moderately high
2	I notice my Chinese mistakes and use that information to help me do better	3.99	.94	Moderately high
3	I pay attention when someone is speaking Chinese	4.11	1.04	Moderately high
4	I try to find out how to be a better learner of Chinese	4.03	1.01	Moderately high
5	I plan my schedule so I will have enough time to study Chinese	3.29	1.35	Moderate
6	I look for people I can talk to in Chinese	2.89	1.30	Moderate
7	I look for opportunities to read as much as possible in Chinese	3.07	1.39	Moderate
8	I have clear goals for improving my Chinese skills	3.79	1.14	Moderately high
9	I think about my progress in learning Chinese	3.90	1.24	Moderately high
	Overall (Use of metacognitive strategies in learning CFL)	3.64	1.18	Moderately high

3. Findings from Research Objective 3.

The findings regarding the level of Chinese academic achievement of the Year 5 students at an international school in Thailand, who participated in this study, are reported in Table 5.

Table 5 Frequency Distribution, Overall Mean and Standard Deviation of Year 5 Students' Chinese Academic Achievement from the Chinese Placement Test Scores

Chinese academic achievement interpretation	Score range	n	%
Excellent	95-108	23	32.86
Good	76-94	22	31.43
Satisfactory	54-75	15	21.43
Needs improvement	0-53	10	14.28
	Descriptive statistics		
Minimum	20.5		
Maximum	106		
M	79.82		
SD	20.87		

4. Findings from Research Objective 4.

Table 6 below indicates the bivariate correlations of self-efficacy for and use of metacognitive strategies with Chinese academic achievement, in regard to the Year 5 students at an international school in Thailand participating in this study.

Table 6 Bivariate Correlations Between Self-Efficacy for Learning CFL, Use of Metacognitive Strategies in Learning CFL and Chinese Academic Achievement of Year 5 Students at an International School in Thailand

Variables	1	2	3
1. Self-efficacy for learning CFL	—		
2. Use of metacognitive strategies in learning CFL	.75* (<.001)	—	
3. Chinese academic achievement	.42* (<.001)	.25* (.037)	—
R	.43* (.001)		
$R^2 \times 100\%$	18%		

Note. *denotes a statistically significant relationship (statistical significance level set at p = .05, two tailed). p-values appear within parentheses below the correlation coefficients.

Research Discussion

In this section, a discussion of the research findings from the current study is provided, by relating such findings with the ones reported by previous research studies.

Self-Efficacy for Learning Chinese as a Foreign Language.

The results of the current study revealed that the overall level of self-efficacy for learning CFL held by the Year 5 students at an international school in Thailand was slightly high. This finding is in line with Kitikanan and Sasimonton's (2017) study, who found that the fourth year undergraduate L2 Thai learners had a relatively high level of self-efficacy in learning English. Both studies found the level of self-efficacy of the participants as "slightly" or "relatively" high, and not "very high", which may be due to a cultural factor: the way how Thai people self-perceive and think of themselves. For instance, Thai middle school students have been reported to ineffectively judge their own capability to achieve success in certain tasks in L2 learning contexts (Anyadubalu, 2010).

Use of Metacognitive Strategies in Learning Chinese as a Foreign Language.

The results of the current study revealed that the overall level of use of metacognitive strategies in CFL held by the Year 5 students at an international school in Thailand was moderately high. This result is similar with the one of Xiao and Lynch (2017), who found a high level of the use of metacognitive strategies of the students from Year 7 to Year 10 studying CFL at Ascot International School in Bangkok, Thailand. However, the result from the current study is different with the one reported by Lai (2009), who found that most the English L2 learners at Tunghai University in Taiwan had a moderate level of use of metacognitive strategies in learning English. Having a moderately high level of use of metacognitive strategies in CFL could be due to the students' exposure to, and knowledge about, metacognitive strategies in Chinese language class, and hence they are able employ metacognitive learning strategies appropriately (Lai, 2009; Oxford, 1990; Oxford & Burry-Stock, 1995).

The Relationship of Self-Efficacy for and Use of Metacognitive Strategies in Learning Chinese as a Foreign Language with Chinese Academic Achievement.

A significant, positive and moderately strong correlation was found between the self-efficacy for learning CFL and Chinese academic achievement held by Year 5 students at an international school in Thailand. This result was in line with Kitikanan and Sasimonton (2017), who reported a significant, positive and strong correlation between self-efficacy and the English academic achievement held by 32 fourth-year undergraduate Thai students majoring in English. Moreover, the current study's finding is also in line with Mahyuddin et al. (2006), who found a significantly, positively and moderately strong correlation between the self-efficacy and the English academic achievement held by 1,146 students from across eight secondary schools in Malaysia.

Regarding the relationship between the use of metacognitive strategies in learning CFL and Chinese academic achievement held by the participants in this study, it was found to be significant, positive and weak. This finding is in line with the study conducted by Kummin and Rahman (2010), who reported a significant, positive and weak correlation between the use of metacognitive strategies in learning CFL and Chinese academic achievement held by 50 undergraduate students of Universiti Kebangsaan Malaysia. However, this result was not in line with Lai (2009), who found a significantly, positive and strong correlation between the use of metacognitive strategies and English language proficiency held by 418 freshmen English L2 learners at Tunghai University, Taiwan. Moreover, this finding is not in line with Xiao and Lynch (2017), who reported a significantly, positive and moderate correlation between the use of metacognitive strategies and Chinese learning achievement held by 91 students from Year 7 to Year 10 studying CFL at Ascot International School, Thailand. A possible reason to obtain a different result to these previous studies could be that the Year 5 students employ other language learning strategies in L2 learning, such as direct ones, more than metacognitive strategies, and the use of these strategies usually accounts for a higher percentage of the variance in L2 academic achievement. (Oxford, 1990; Oxford & Burry-Stock, 1995)

The combination of self-efficacy for and the use of metacognitive strategies in learning Chinese as a foreign language held by Year 5 students at an international school in Thailand was found to be significantly and moderately strongly correlated with their Chinese academic achievement. This can be interpreted as the combination of self-efficacy for and the use of metacognitive strategies in learning CFL held by the participants having a moderately strong explanatory and predictive power for their Chinese academic achievement. However, this also indicates that the participants' self-efficacy for and use of metacognitive strategies in learning CFL combined explain 18% of their Chinese academic achievement, R^2 =.18. This could be due to the fact that the participants' Chinese academic achievement is influenced by other variables that have been reported to have a significant influence on learners' L2 achievement (e.g., attitude toward the language, interest, anxiety, motivation, age, linguistic heritage, learning intelligence style, and personality; Dörnyei, 1998; Ellis, 1985; Gardner, 2010), and which were not considered in the present study.

Research Body of Knowledge

The body of knowledge obtained from conducting this study is summarized in Figure 1, which displays the different factors that were found to be either significantly related or influencing participants' Chinese academic achievement.

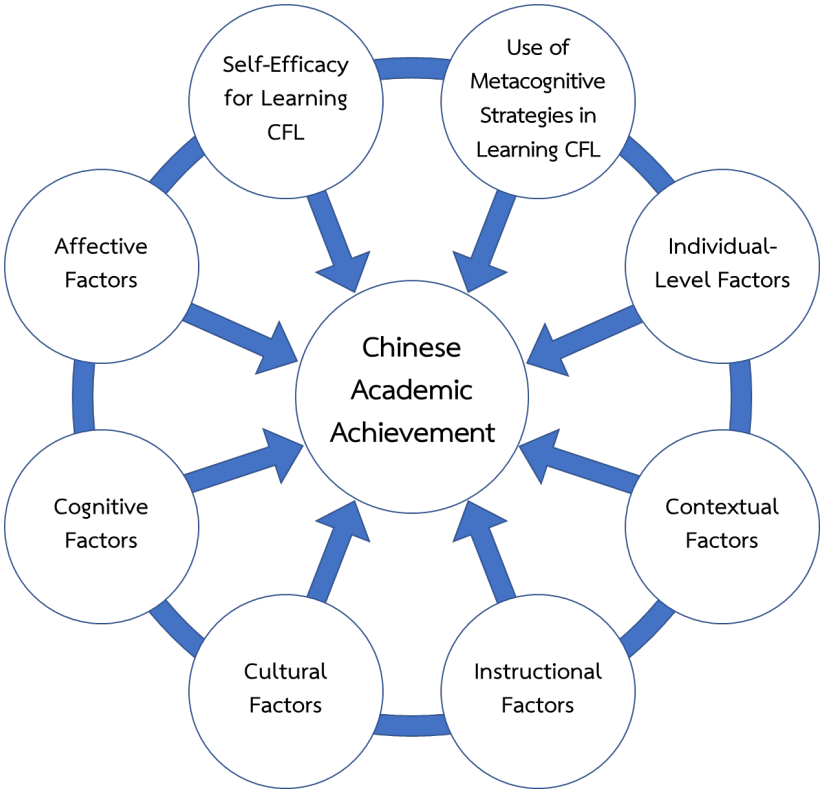

Figure 1 Research Body of Knowledge

Overall self-efficacy for learning has been shown to have a significant influence on L2 academic achievement, not only by the current study, but also by previous ones (e.g., Kitikanan & Sasimonton, 2017; Klomegah, 2007; Mahyuddin et al., 2006; Raoofi et al., 2012; Tilfarlioğlu & Ciftici, 2011; Wang et al., 2013). Similarly, the results of the current study revealed that the overall level of use of metacognitive strategies had a significant influence on L2 academic achievement, which was in line with previous results reported in the literature. (e.g., Kummin & Rahman, 2010; Lai, 2009; Oxford & Burry-Stock, 1995; Xiao & Lynch, 2017).

From the data analysis and the literature review conducted for this study, additional factors that could have a significant influence on L2 academic achievement were identified: affective factors (e.g., attitude, interest, anxiety, motivation; Anyadubalu, 2010; Dörnyei, 1998; Gardner, 2010); cognitive factors (e.g., beliefs, learning intelligences; Ellis, 1985; Oxford, 1990; Wang et al., 2009); individual-level factors (e.g., age, personality; Ellis, 1985; Oxford, 1990); contextual factors (e.g., school administration, peers, teachers, parents; Gardner, 2010; Oxford, 1990); instructional factors (e.g., lesson planning, instructional activities and materials used during the class; Dörnyei, 1998; Gardner, 2010; Oxford, 1990); and cultural factors (e.g., linguistic heritage; Oxford, 2010).

Research Suggestions

1. Suggestions in practice

1.1 In relation to the listening subscale, the findings of this study showed that the Year 5 students at the target international school in Thailand rated QCSE Items 9 and 22 with the lowest score, which indicates that their level of belief in their capability to achieve the stated tasks is neither high nor low. Therefore, the researchers suggest that students can improve their Chinese listening self-efficacy outside of the classroom by watching and listening to Chinese podcast, TV shows, videos, or films.

1.2 In relation to the speaking subscale, some QCSE items (e.g., Items 4 and 6) were rated slightly lower than others. The researchers suggest that students may practice describing and telling in Chinese how their school is or directions from places to places to their fellow classmates.

1.3 In relation to the reading subscale, some QCSE items were rated slightly lower than the others (e.g., Items 12, 16, and 25). The researchers suggest that students should practice extracurricular readings in Chinese to broaden their knowledge and ability to read various reading materials. At first, it may be difficult, hence, students may use dictionaries to help them through the readings.

1.4 In relation to the writing subscale, some QCSE items were rated slightly lower than the other items (e.g., Items 5, 18, 28, and 31). The researchers advise the students to improve their writing through more daily practice of writing Chinese characters. Chinese writing includes two parts, writing the Chinese characters correctly and composing the text. In order to improve the writing of Chinese characters, this requires time and perseverance by constant practicing and writing. While for composing the text, the researchers suggest reading various text types and genres, in order to learn the difference between colloquial and literal Chinese language and know how to write a letter, email, or essay in Chinese.

1.5 In relation to the level of use of metacognitive strategies in learning CFL, the findings indicate some SILL items (i.e., Items 5, 6, and 7) were the ones with the lowest overall rating in this study. In this regard, the researchers suggest that students may practice using Chinese language outside of the classroom or even the school, such as communicating with people who can speak Chinese, reading Chinese books in their leisure time, and planning time to study Chinese outside from doing homework.

1.6 In order to support students to have higher overall levels of self-efficacy for learning CFL, the researchers would like to suggest the teachers to incorporate more class activities or work that may boost students' self-efficacy for learning CFL, to increase students' Chinese practice in relation to all four literacy skills, and to create learning environments that are more engaging by making students a more active part of their own L2 learning process.

1.7 Teachers are suggested to encourage students to be more self-regulated and take control of their own learning by helping them to set goals every unit and helping them to regularly reflect of their own learning for improvements, in order to foster their use of metacognitive strategies.

1.8 Even though teachers are the ones that have the most direct impact on the students' learning, the school administrators' plans and decisions of the school's curriculum will affect the teacher's teaching, which in turn influence the students' learning. The researchers suggest the administrators to guide the teachers more in developing curriculum and lesson plans that help boosts students' self-efficacy and encourage students to practice their use of metacognitive skills in their CFL learning.

2. Suggestions for research

2.1 The current research was conducted only on 70 Year 5 students at the target international school in Thailand. Therefore, the findings of this study may not be generalizable to schools with different student and curriculum profile. It is suggested that future researchers may consider conducting studies on larger sample sizes, wider range of grade levels, school subjects and schools when investigating the variables addressed in this study.

2.2 Since this study was conducted over a short period of time only, it is suggested that future researchers may also consider conducting longitudinal studies to examine the research variables addressed in this study throughout a school year or years, and hence follow up the changes and the relationship between the variables.

2.3 Also, future researchers may consider conducting a mixed study of both quantitative and qualitative approaches, in order to examine the students' self-efficacy for and use of metacognition in learning CFL more in-depth and have a more insightful understanding of the factors and reasons that affect the students' Chinese language learning.

2.4 In terms of the research variables considered in the present study, it was found that the combination of the participants' self-efficacy for and use of metacognitive strategies in learning Chinese as a foreign language accounted for only 18% of the variance of their Chinese academic achievement, and hence an 82% of that variance was explained by other variables that were not included in the current study. There are many other factors that may influence and have a significant impact on learners' Chinese academic achievement, in addition to the two proposed in this study, such as: attitude, interest, motivation, age, learning intelligences, linguistic heritage, and personality (Dörnyei, 1998; Ellis, 1985; Gardner, 2010). It is suggested that future researchers may consider to include some of these variables and examine the relationship with Chinese academic achievement more in-depth.

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