



Comparing Language Learning Strategies of English and Chinese Employed by Tertiary Thai Students

Woralak Bancha and Sirikhwan Phathairak*

Faculty of International Studies, Prince of Songkla University, Thailand

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* Corresponding author

E-mail address:

sirikhwan.p@phuket.psu.ac.th

Abstract

The scope of multilingualism in language learning strategies is currently quite limited. This study aims to address the gap by investigating the language learning strategies used by Thai university students who enrolled in an international program conducted in English (L2) and were also studying Chinese as their third language (L3). The research focuses on comparing the strategies employed for learning English, a West Germanic language in the Indo-European language family, and Chinese, a Sino-Tibetan language. The study surveyed 123 university students in International Business: China from southern Thailand who learned through English and studied Chinese as part of their program. Data were collected using two sets of questionnaires based on the Strategy Inventory for Language Learning (Oxford, 1990). Descriptive statistics and paired sample t-tests were used to analyze the closed-ended questionnaire responses, while descriptive statistics and thematic analysis were applied to the open-ended questionnaire data. The findings from the closed-ended questionnaire indicated that students frequently used social strategies for learning both languages. However, the open-ended questionnaire responses revealed a preference for cognitive strategies when learning both languages. Despite the linguistic differences between English and Chinese, the findings showed similar learning strategies, with no significant differences at the 0.05 level except for memory strategies ($p = 0.00$). The study discusses these findings and offers recommendations for language educators.

1. Introduction

In the era of globalization, multilingualism or individual pluralism, defined as those who are fluent in many languages or are able to learn more than one language, is highly in demand (Pawlak & Kiermasz, 2018). The capacity to communicate with people worldwide is vital, particularly in multilingual communities where the coexistence, interaction, and contact of different languages at both societal and individual levels play a significant role (Wei, 2013). Regarding the essential need of global communication, numerous educational institutions worldwide, including those in Thailand, encourage learning English as a second language (L2) and an additional third language (L3) to equip students for the demands of the global workforce.

English is considered a foreign language in Thailand. Even though it is a foreign language, it has long been seen as a prestigious foreign language, crucial for the nation's modernization since the time of King Rama V (Fry & Bi, 2013). As a result, English is the first foreign language that all Thai students are mandated to learn both in schools and universities (Padermpach, 2017). Despite its classification as a foreign language, English is widely used as a second language (L2) in Thailand (Office of the Basic Education Commission, 2008). Other languages, such as Chinese, are considered third languages (L3). This status underscores the significant role English plays in educational and professional settings, while also acknowledging the growing role of other languages like Chinese, which has also been spoken by many people globally. In this study, English is recognized as a second language (L2), and Chinese is regarded as a third language (L3) as it is an additional language learned after English.

Recognizing the global significance of English, the university where this study was conducted offers English as a medium of instruction to all programs and actively promotes its use as a second language (L2). Additionally, a third language, Chinese, is highly popular and chosen by the majority of students who take the International Business: China program in the faculty. For this program, students are required to complete a minimum of seven English language courses to support learning through English-medium instruction, as well as at least ten courses in Chinese to develop a certain level of proficiency in Chinese for communication. However, learning a foreign language requires considerable effort and determination, making language learning become a very challenging task for multilingual learners (Pawlak & Kiermasz, 2018).

One of the effective pedagogical approaches to enhancing foreign language competence involves understanding learners' strategies and providing teaching techniques and activities that align with their learning styles. Engaging students with tasks that

interest them can foster a more positive attitude and higher motivation, both of which are crucial for successful language acquisition (Gardner & Lambert, 1959, as cited in Záborská, 2020). Therefore, it is essential to investigate the language learning strategies preferred by students so that teaching methods can be prepared to suit and promote their learning styles.

While numerous studies have focused on language learning strategies defined as techniques employed to acquire a target language for second language (L2) learners, research on strategies used by learners studying two or more languages remains limited (Jessner & Török, 2017; Pawlak & Kiermasz, 2018; Saez-Fajardo, 2023). However, there has recently been growing research interest in multilingual learners who speak two or three languages, particularly in the contexts of bilingualism and trilingualism (Cenoz, 2013; Edele et al., 2018; Saez-Fajardo, 2023). More research on multilingualism is therefore essential to unravel the complex interactions between metalinguistic and cross-linguistic awareness, offering valuable insights for future studies (Jessner & Török, 2017).

Previous research on multilingual learners has primarily focused on bilingual and trilingual, exploring language learning strategies among various groups, such as adult learners (e.g., Dmitrenko, 2017) and immigrants (e.g., Edele et al., 2018). Other studies have examined the advantages and disadvantages of learning two languages (e.g., Edele et al., 2018) or compared the differences between learners of English and other closely related languages, such as German or French (e.g., Korkmaz, 2013). However, there remains a gap in research addressing language learning strategies among multilingual learners studying languages from different language families. It is still worthwhile to investigate whether multilingual learners from distinct language families share commonalities or differences in their learning strategies. Specifically, investigating learners who take different languages from the West Germanic language group in the Indo-European language family, such as English, alongside learners of languages from the Sino-Tibetan family, such as Chinese, may provide new insights into the strategies used to acquire target languages from these different families.

In particular, this study consisted of three main purposes. First, it aimed to identify the language learning strategies frequently used by Thai EFL university students studying English (L2). Second, it aimed to explore the strategies commonly employed by Thai EFL university students studying Chinese (L3). Finally, the study aimed to compare whether the students taking the Sino-Tibetan language (Chinese) share similar learning strategies for learning an Indo-European language (English).

2. Research Questions

This study aims to answer the following questions:

2.1 What language learning strategies do Thai university students take to acquire English?

2.2 What language learning strategies do Thai university students take to acquire Chinese?

2.3 Do the students employ similar learning strategies to acquire English and Chinese?

3. Literature review

Language Learning Strategies for L2 or L3

Language learning strategies are widely regarded as crucial for effective language acquisition. Numerous studies demonstrate a strong link between these strategies and language proficiency (Habók & Magyar, 2018; Jaekel, 2020). Learners who know multiple foreign languages are likely to use a broader range of language learning strategies compared to those who learn only one language (Dmitrenko, 2017). Additionally, successful language learners are more likely to apply strategies that are well-suited to the specific tasks they encounter (Shi, 2017).

Researchers have provided various definitions of language learning strategies. O'Malley and Chamot (1990, p. 1) describe the strategies as "special thoughts or behaviors to help individuals comprehend, learn, or retain new information." Rubin (1987) defines them as facilities students use to receive, modify, and store information, including plans, routines, and activities. Another definition is given by Stern and Allen (1992, p. 261) as "a broad-based approach and deliberate learning techniques for achieving goals through joint activity." Regarding these definitions, language learning strategies can be understood as techniques that learners deliberately practice to acquire a new language.

Similarly, scholars have proposed various classifications of language learning strategies (such as Shi, 2017; Stern, 1975). However, the most widely used taxonomy was developed by Oxford (1990), and it has been referenced in numerous studies, such as those by Kean (2018), Pawlak and Kiermasz (2018), and Saputro and Fauziati (2019). Oxford (1990) classifies language learning strategies into two main categories of direct and indirect strategies. While direct strategies directly apply to learning the target language, the indirect strategies focus on managing the learning process rather than direct

language acquisition. Then these two major categories are divided into six sub-categories, as presented in Table 1.

Table 1

Major and sub-categories of language learning strategies

Direct Strategies	Indirect Strategies
Memory strategies	Metacognitive strategies
Cognitive strategies	Affective strategies
Compensation strategies	Social strategies

Oxford (1990) further elaborates on these six categories. Memory strategies involve techniques for enhancing memory storage and retrieval, such as repetition, mnemonic devices, organizing information, and using visual aids. These strategies aid learners in memorizing the target language for both short-term and long-term use. Cognitive strategies involve active processing of the language, such as analyzing structures, summarizing, reasoning, creating mental links, and practicing pronunciation. Compensation strategies help learners overcome gaps in their knowledge or communication challenges by using techniques like guessing, asking for help, and employing communication strategies. Metacognitive strategies allow learners to manage their learning process through planning, monitoring, and evaluating their progress. Affective strategies help learners manage their emotions, reduce anxiety, and boost motivation and confidence through techniques like setting realistic goals, self-reward, and stress management. Finally, social strategies emphasize learning through interaction, such as asking questions, seeking corrections, collaborating with peers, and creating supportive learning environments.

In the current study, these strategies were used as the main theoretical framework to understand the categories of the language learning strategies employed by the students. All these language learning strategies were used to identify the types of strategies that participants in the current study perceived as their most frequently used, which were further employed for discussion.

Previous studies have examined language learning strategies for English and Chinese in various contexts. For example, research on English learning strategies has been conducted in Indonesia (Hapsari, 2019; Tanjung, 2018), Malaysia (Rubaai et al., 2019), and Iran (Khansir et al., 2021). Similarly, studies on Chinese learning strategies

have been carried out in Brazil (Yang et al., 2021), Malaysia (Teoh et al., 2022), Taiwan (Wu, 2023), and China (Li et al., 2021).

In the context of English language learning in Thailand, several studies have focused on Thai university students, showing inconclusive results. For instance, Arunreung et al. (2018) examined the strategies used by 215 second-year undergraduate students from central Thailand using a questionnaire of Oxford's Strategy Inventory for Language Learning (SILL), version 7. Their research revealed that the students used compensation strategies the most, followed by affective strategies, social strategies, memory strategies, and cognitive strategies, respectively. Saranasathaporn (2017) conducted in-depth interviews with eight high-proficiency undergraduate students, each with a TOEIC score of at least 800, from a government university. Her study found that these students frequently used direct learning strategies, particularly memory and cognitive strategies, to remember English word meanings. In a study by Chansamak and Srisapoom (2022), which focused on 61 fourth-year undergraduate students in an English Education program, metacognitive learning strategies were found to be the most commonly used, while memory strategies were the least utilized. Similarly, Moeithaisong (2023) surveyed 283 Thai undergraduate students using a questionnaire based on Oxford's SILL version 7. The study revealed that metacognitive and social strategies were the most frequently employed, while affective strategies were the least used. As shown in the previous studies, results vary according to individual learners and specific contexts, leading to inconclusive findings.

Surprisingly, previous studies concerning Chinese learning strategies utilized by Thai students show similar results. To illustrate, Watthanawelu (2017) investigated the strategies of undergraduate students at a university in southern Thailand through a questionnaire with a 5-point Likert scale. Her study found that students frequently used compensation, metacognitive, and cognitive strategies when learning new Chinese vocabulary. Similarly, the study by Thongpleaw et al. (2022) with undergraduate students at a university in central Thailand, indicated that metacognitive and compensation strategies were the most frequently used by students. Another study by Wattanakamolkul and Praparkarn (2021) found that university students at another university in Bangkok, Thailand frequently employed compensation, social, affective, metacognitive, cognitive, and memory strategies, respectively. Regarding these studies, many Thai university students frequently used metacognitive and compensation strategies to learn Chinese.

Apart from a focus on studies of learners taking an individual language, there have been a few studies examining the language learning strategies used by students

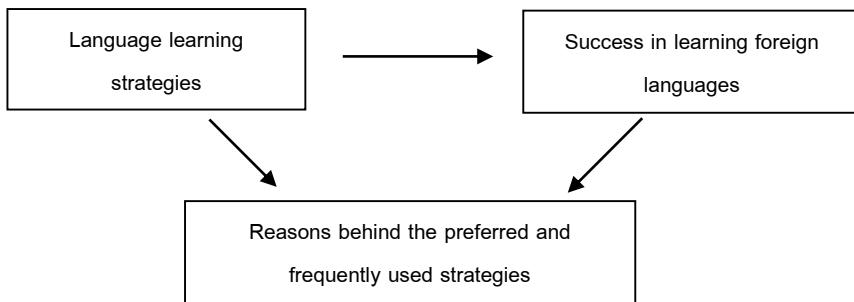
learning two foreign languages simultaneously (Korkmaz, 2013; Pawlak & Kiermasz, 2018; Sung, 2011), and the results have been inconclusive. For instance, Korkmaz (2013) investigated whether university students of English (L2) and German (L3) used different strategies compared to learners of English (L2) and French (L3). The results from Oxford' SILL (1990), version 7, showed similarities in the most commonly used cognitive strategies and the least commonly used affective strategies between the two groups. Pawlak and Kiermasz (2018), using Oxford' SILL (1990), version 7 and interviews, found that Polish university students who were learning English (L2) and another additional language (L3) more frequently employed language learning strategies with L2, with memory strategies being the most commonly used. Sung (2011) found that Chinese learners who had studied two languages before starting their L3 more frequently used metacognitive, cognitive, affective, and social strategies compared to those who had learned only one language.

Unlike the aforementioned studies conducted with non-Thai students, a study by Wichitwetchaphaisan et al. (2016) examined the English and Japanese language learning strategies of 4th-year undergraduate Thai students majoring in Japanese at a university in Thailand. The research revealed that the learning strategies for the two languages were not distinctively different, and students used both direct and indirect strategies for learning both languages. Their study suggests that when students learn other languages, such as Chinese, Korean, Spanish, Russian, or even ASEAN languages, they tended to employ similar learning strategies to cope with all the new languages.

Given the limited research on learners studying English as a second language (L2) alongside an additional language (L3), this study aims to explore the strategies used by Thai university students who are required to take two foreign languages during their studies from first to third year, making them study two languages at the same time. Additionally, the study compared whether learners of a West Germanic Indo-European language (English) share similar or different strategies with learners of a Sino-Tibetan language (Chinese).

4. Conceptual framework

A conceptual framework outlines the expected connections between variables. It identifies the key objectives and demonstrates how they are interrelated to form conclusions (Swaen & George, 2024). The diagram below shows the conceptual framework of the study.



5. Research methodology

5.1 Participants

The study involved 123 university students from first to fourth year at a public university in southern Thailand. These students were enrolled in International Business: China (IB). The university was selected for the study because it provides English-medium or international programs, along with third-language options from different language families. A purposive sampling method was used to select participants based on the requirement that they were learning an additional (L3) language of Chinese through an English (L2) medium of instruction. Specifically, the students in the IB program were selected because they took seven English courses and ten Chinese courses. While they were not English or Chinese majors, they were required to take both language courses as part of the program. Even though the participants were not language majors, they were selected because the main purpose of the study was to compare whether they employed similar strategies to learn two languages from different language families, rather than to assess the success or effectiveness of the language learning strategies used by individual learners. The sizes of samples were derived from Krejcie and Morgan's (1970) population table and are shown in Table 2 below.

Table 2

Population data of questionnaire respondents

Program	Gender	N	n
International Business: (IB)	Male	16	123
	Female	107	

Even though the number of male students responding to the questionnaire was significantly lower than that of female students, this should not pose a problem, as the

small number of males reflects the actual population. Additionally, the purpose of the study was not to compare differences in language learning strategies between genders. The number of participants who commented on both closed and open-ended questions was 123 (100%). To validate the findings from the closed-ended questionnaire, the responses from the open-ended part were used for the analysis.

5.2 Research Instruments

The study utilized one main research instrument: an online questionnaire assessing students' English language learning strategies and Chinese language learning strategies. The questionnaire was adapted from Oxford's (1990) Strategy Inventory for Language Learning (SILL), version 7, as it was mostly well accepted and employed in many studies, such as Korkmaz (2013), Moeithaisong (2023), Pawlak and Kiermasz (2018), Prissananuntakul and Chaengchenkit (2017), Yuthaphoom and Worawut (2023), and Zou and Supinda (2022).

The questionnaire was divided into three sections: demographic information, a close-ended part to understand the students' perceptions of the language learning strategies they frequently used to learn second or third languages, and an open-ended part. The questions in the open-ended part were designed to focus on the second or third language learning strategies preferred and frequently used, the reasons behind these perceptions, and whether they employed the same strategies for learning English and Chinese. To validate the results from the questionnaire, findings from the open-ended part were used to complement the quantitative data.

5.3 Research Procedures

The study was conducted following these procedures. First, the main instrument of the questionnaire for Chinese and English was constructed and adapted based on Oxford's (1990) SILL version 7. Then it was translated from English into Thai and checked for validity and clarity of the translated version by a Thai teacher of English. Next, a pilot questionnaire was administered to 30 non-target students to test reliability, resulting in a Cronbach's alpha of 0.943. Before completing the online questionnaire, students were verbally informed about the study's purposes and procedures, and verbal consent was obtained. After that, participants were briefly informed about the study's purposes and procedures, and verbal consent was obtained from students who were not part of the pilot group. The QR code of the online questionnaire was shared with all IB students at the end of a monthly student meeting at the faculty. Finally, the open-ended questionnaire data, initially in Thai, was translated into English, then back-translated into Thai by a Thai teacher of English to ensure accuracy. Both translations were compared

to confirm that they conveyed the same meanings. If there was a disagreement, the Thai translation was adjusted until an equivalent translation was achieved.

5.4 Data Analysis

The data from the closed-ended questionnaire were analyzed using mean scores and percentages through SPSS (Statistical Package for the Social Sciences) for the first and second research questions. The mean scores were interpreted according to Oxford's (1990) guidelines for the frequency of language learning strategies as follows:

Table 3

Result Interpretation

Level	Interpretation	Score Range
High	Most frequently used	4.5 to 5.0
	Frequently used	3.5 to 4.4
Medium	Moderately used	2.5 to 3.4
	Rarely used	1.5 to 2.4
Low	Least frequently used	1.0 to 1.4

A paired sample t-test through SPSS for was conducted to answer the third research question, aiming to compare the employment of English and Chinese language learning strategies by the students.

Apart from the closed-end questionnaire results used to address all three research questions, the open-ended data from the questionnaire were also used for the validity and credibility of the results from the closed-ended part. Data derived from the opened-ended part were analyzed through descriptive analysis (frequency and percentage), and a thematic approach to identify, analyze, and report themes was applied to analyze the data relating to reasons behind their perception (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). Thematic analysis was chosen because it can be applicable across any theoretical frameworks (Braun & Clarke, 2006, p. 81). Thematic analysis in this study followed the five stages outlined by Braun and Clarke (2006). The first stage involved becoming familiar with the data, where the transcriptions were read multiple times to develop a comprehensive understanding and to identify emerging themes. The second stage focused on generating initial codes. A code is a label or name given to a segment of text that represents a specific idea or piece of information (Cohen, 2017). The codes were color-coded based on recurring keywords with similar meanings within the same contexts. Then similar responses were grouped into categories or themes,

while differing opinions were placed into separate categories. The study's questions were used to guide the identification of themes.

To ensure the reliability of the identified themes, an inter-rater technique was employed. Two English teachers reviewed the codes, sub-themes, and themes, and adjustments were made following discussions to reconcile any discrepancies. The major themes that emerged from the open-ended questions included the strategies preferred and frequently used to learn English, the strategies preferred and frequently used to learn Chinese, the reasons behind the students' most preferred and frequently used English language learning strategies, the reasons for their preferred and frequently used Chinese language learning strategies, and their perceptions of whether they used the same or different strategies when learning English and Chinese.

Table 4

Examples of Codes, Sub-themes, and Themes

Student	Excerpts	Codes	Sub-themes	Themes
S4	I like to watch movies or TV series on the internet or YouTube because it is fun and relaxing. It is not stressful.	Fun Not boring Not stressful	Stress-free learning strategies	The most favorite learning strategies
S12	I always watch movies. It is fun.	Fun	Stress-free learning strategies	The most favorite learning strategies
S23	I enjoy watching movies or series because it is not boring.	Not boring	Stress-free learning strategies	The most favorite learning strategies

Note: S = a student

The number after S = the order of the students who replied to the questionnaire.

6. Results

6.1 RQ1: Strategies use of learners learning English as L2

6.1.1 RQ1: Results from closed-ended questionnaire

Mean scores were used to understand the data derived from the closed-ended questionnaire regarding the learning strategies students frequently used to learn English, as illustrated in Table 5 below.

Table 5*Strategies used for learning English as L2*

Strategy Categories For learning English (L2)	n	M	SD	Level	Interpretation
Memory		3.36	0.56	Medium	Moderately used
Cognitive		3.54	0.54	High	Frequently used
Compensation		3.63	0.54	High	Frequently used
Metacognitive	123	3.66	0.55	High	Frequently used
Affective		3.68	0.48	High	Frequently used
Social		3.71	0.43	High	Frequently used
Overall LLS used		3.60	0.52	High	Frequently used

As presented in Table 5, the overall use of language learning strategies among students with English as their L2 was high ($\bar{x} = 3.60$). According to Oxford's (1990) criteria, the LLS for L2 can be categorized as frequently used. Among the six strategy categories, social strategies were the most commonly employed ($\bar{x} = 3.71$), while memory strategies were the least utilized ($\bar{x} = 3.36$). The remaining four categories consisting of affective strategies ($\bar{x} = 3.68$), metacognitive strategies ($\bar{x} = 3.66$), compensation strategies ($\bar{x} = 3.63$), and cognitive strategies ($\bar{x} = 3.54$) were similarly frequently used.

6.1.2 RQ1: Results from closed-ended questionnaire

Percentage and thematic analysis were applied to understand findings from the open-ended questionnaire, as shown in Table 6 below.

Table 6*The most preferred and frequently used English learning strategies*

The most preferred and frequently used English learning strategies	Frequency	Percentage
1. Watching movies or series	51	41.47
2. Listening to music/ podcast	25	20.34
3. Memorizing vocabulary/ phrases/ sentences	18	14.63
4. Practicing speaking with native speakers (teachers or friends)	11	8.94
5. Playing games	8	6.51

Table 6

The most preferred and frequently used English learning strategies (Cont.)

The most preferred and frequently used English learning strategies	Frequency	Percentage
6. Reading	4	3.25
7. Practicing writing	3	2.43
8. Others	3	2.43
Total	123	100

Table 6 shows the learning strategies that the students preferred the most in learning English. The results from the open-ended question part above illustrated students' responses to the question, "Which language learning strategies do you prefer the most and frequently used in learning English, and why so?".

The descriptive results showed that students preferred cognitive strategies the most, as seen from watching movies, series, or video clips (41.17%) and listening to music or podcasts (20.34%). The second most preferred strategy was memory, as they learned through memorizing vocabulary, phrases, or sentences (14.63%). Social strategies were another learning strategy students employed, as they enjoyed learning through practicing speaking English with native English-speaking teachers and non-Thai peers (8.94%).

Two main themes emerged from the open-ended data of the questionnaire: the most preferred and frequently used learning strategies for learning English, and the reasons behind those strategies. The responses indicated that the most favored and frequently employed learning strategies were cognitive. Their responses could be categorized into two main reasons. The first reason was the stress-free learning strategies. For instance,

"I like to watch movies or TV series on the internet or YouTube because it is fun and relaxing. It is not stressful. It is easy to understand because I can see what really happens, and I think it is easy to remember words and sentences." (S4)

"I always watch movies. It is fun, and I can learn their accents, imitate how they pronounce words, and learn how words are actually used in contexts." (S12)

“I enjoy watching movies or series because it is not boring. I can practice listening and read subtitles. It helps me learn new words as I look up unknown words.” (S 23)

The findings revealed that cognitive strategies focused on learning English in a relaxing environment were the most favorite learning strategies. The data indicated that a stress-free approach like watching movies or series helps improve listening skills, pronunciation, and vocabulary. Thus, the data suggests that beyond the entertaining aspect of this language learning strategy, watching movies or series leads to the benefits of repeated exposure to the target language.

Another prominent reason involves the easy accessibility of online learning sources. Similar to watching movies or series, students commented on learning through music as a relaxing and convenient way of learning. For example,

“It makes me relaxed, and it is very easy to access anywhere and anytime.” (S26)

“I like to listen to music. I can listen to it repeatedly without boredom. It makes me remember words or sentences through music because I remember the songs as I listen to them again and again. It is in my ears.” (S43)

“I can remember words and use them as I can see how words are put into actual use.” (S51)

The findings pertaining to their preferences on online learning showed that students recognized the advantages of learning through movies and music. The data suggests that learning through online media, including watching series and listening to music, is practical, and it helps them improve their listening skills, learn new words, and understand native pronunciation.

In addition to cognitive strategies, the findings showed social strategies were another strategy many students commented on. Their responses related to how words are used in real-life contexts, observe language structures in use, and become accustomed to or actively engage with the target language. The following responses demonstrate these strategies and their reasoning.

“Chatting with non-Thais is simple and not boring.” (S19)

“It enables me to familiarize myself with the language, and if I practice speaking frequently, I will be able to use it automatically.” (S62)

The findings suggest that a feeling of fun plays a part in their learning. However, students value opportunities to use the target language, which they believe can enhance their language learning. The data also suggests that students are aware of the importance of using the target language for communication, which can eventually enable them to use it effectively in real-life situations.

6.2 RQ2: Strategies use of learners learning Chinese as L3

6.2.1 RQ2: Results from closed-ended questionnaire

Mean scores were employed to analyze the data obtained from the closed-ended questionnaire, which focused on identifying the learning strategies students commonly utilized to learn Chinese, as presented in Table 7 below.

Table 7

Strategies used for learning Chinese as L3

Strategy Categories in learning Chinese (L3)	n	M	SD	Level	Interpretation
Memory		3.63	0.67	High	Frequently used
Cognitive		3.56	0.64	High	Frequently used
Compensation		3.62	0.58	High	Frequently used
Metacognitive	123	3.64	0.58	High	Frequently used
Affective		3.66	0.51	High	Frequently used
Social		3.70	0.46	High	Frequently used
Overall LLS used		3.63	.57	High	Frequently used

Table 7 shows the mean scores obtained from the questionnaire completed by students for learning Chinese as their L3. As suggested by the quantitative data, the overall strategy employed by students was high or frequently used ($\bar{x} = 3.63$). The results of the mean scores regarding all six strategy categories revealed that the most frequently used strategy was the social strategy ($\bar{x} = 3.70$), followed by affective strategy ($\bar{x} = 3.66$), metacognitive strategy ($\bar{x} = 3.64$), memory strategy ($\bar{x} = 3.63$), and cognitive strategy ($\bar{x} = 3.69$). The least frequently used strategy was cognitive strategy ($\bar{x} = 3.56$).

6.2.2 RQ2: Results from opened-ended questionnaire

Percentage and thematic analysis were conducted to interpret the findings from the open-ended questionnaire regarding the learning strategies students preferred and frequently used, as illustrated in Table 8 below.

Table 8

The most preferred and frequently used Chinese learning strategies

The most preferred and frequently used for Chinese learning strategies	Frequency	Percentage
1. Watching movies or series	39	31.71
2. Listening to music/ podcast	27	21.95
3. Memorizing vocabulary/ phrases/ sentences	21	17.07
4. Practicing speaking with native speakers (teachers or friends)	14	11.38
5. Playing games	9	7.32
6. Reading	5	4.07
7. Practicing writing	5	4.07
8. Others	3	2.44
Total	123	100

Table 8 illustrates the students' favorite and frequently used Chinese learning strategies, deriving from the open-ended questionnaire data. Findings revealed that students preferred cognitive strategies of watching series (31.71%), and listening to music (21.95%) followed by memory strategies of memorizing vocabulary or sentences (17.07%) and social strategies of practicing speaking with Chinese teachers or friends (11.38%).

Two key themes were identified: the preferred and most commonly used strategies for learning Chinese, and the underlying reasons for choosing those strategies. The findings showed that cognitive strategies were the most popular and frequently employed. Their comments could be grouped into two reasons.

Their major reasons were related to stress-free learning and its advantages for learning Chinese. For example,

“I always watch the series because it is not boring.” (S23)

“It is easy to understand. If I don’t understand it, I can just look up a word.” (S41)

“I can improve my Chinese as I can learn vocabulary and use those sentences in my life.” (S56)

“I can practice listening from watching the series and imitating their pronunciation.” (S68)

“Songs are simple and catchy. It is not boring to listen to it repeatedly.” (S74)

“I can practice my listening skills and translation when I listen to music.” (S79)

These findings indicated that cognitive strategies were the preferred learning strategies. The comments above revealed the key reasons for a fun and relaxing learning experience and the improvement of language skills through authentic contexts. The data suggests that even though their main reason was related to the enjoyment of learning, they were fully aware of the advantages at the same time.

Apart from cognitive strategies, memory strategies relating to memorizing words or sentences have been employed by many students. Their reasons could be categorized as the simplest method of learning and quickest way of learning many words or sentences in a short time. The following responses express their reasons.

“Reciting words enables me to learn a lot of new words quickly.”
(S37)

“Writing words repeatedly makes me memorize spellings and meanings.” (S49)

Data suggests that apart from cognitive learning strategies, some students rely on memory strategies as simple strategies to acquire their L3.

6.3 RQ3: Comparison of the strategies used in learning English (L2) and Chinese (L3)

6.3.1 RQ3: Results from closed-ended questionnaire

To answer RQ3 relating to comparison of the strategies for learning English and Chinese, an independent sample t-test was employed to analyze findings from the closed-ended questionnaire as shown in Table 9.

Table 9

Comparison of the strategies for learning English and Chinese employed by the students

Strategy Category	M	SD	M(df)	SD(df)	t	p
Memory						
English	3.36	0.56				
Chinese	3.63	0.67	-.28	.84	-3.652	.000
Cognitive						
English	3.54	0.54				
Chinese	3.56	0.64	-.025	.067	-.373	.710
Compensation						
English	3.63	0.54				
Chinese	3.62	0.58	.01	.70	.145	.885
Metacognitive						
English	3.66	0.55				
Chinese	3.64	0.58	.01	.70	.207	.836
Affective						
English	3.68	0.48				
Chinese	3.66	0.51	.01	.59	.210	.834
Social						
English	3.71	0.43				
Chinese	3.70	0.46	.01	.50	.194	.847

Note: $p < 0.05$

Table 9 shows that there was no statistically significant difference between English and Chinese ($p < 0.05$), except for the memory strategy ($p > 0.05$). The data indicated that there was no significant difference in the language learning strategies used

by students learning a West Germanic language from the Indo-European family (English) and a Sino-Tibetan language (Chinese), except for the memory strategy ($p > 0.05$).

Furthermore, the findings showed that the majority of the students responded that they employed similar strategies, as shown in the table below.

Table 10

Students' perception of their employment of English and Chinese language learning strategies

Students' perception of their English and Chinese language learning strategies	Number of students	Percent
Similar	86	69.92
Different	37	30.83
Total	123	100

Table 10 shows that the majority of the students perceive their similar learning strategies with both languages.

Besides the closed-ended questionnaire, data derived from the open-ended questions asked if they thought they employed similar or different learning strategies for taking English and Chinese. Two main themes emerged, including similarities or differences in the learning strategies for both languages and the reasons supporting their perspectives.

The findings showed that the majority of the students responded to similarities in language learning strategies to acquire both languages. Their reasons for supporting the similarities between these two languages are related to their perception as they were effective in learning a foreign language. For instance,

“I learn both languages the same way because learning from movies or series is not boring.” (S12)

“I use the same strategies. I recite words as a way to learn the vocabulary of both languages.” (S60)

“I do the same for both languages through memorizing words and sentences and using them.” (S71)

“They are the same. I practice listening to movies or music. Then do it repeatedly until I memorize the words or sentences. This way allows me to pronounce words correctly and acquire the accents.” (S82)

Findings showed that students were satisfied with their learning strategies and perceived effective in acquiring the target languages. The data therefore suggests that as they perceive their strategies are effective, they apply the same strategies to acquire English and Chinese.

In contrast, students who responded to their perceptions on differences in terms of writing characters, grammatical structures, and sources of learning. For example,

“Chinese characters are more complicated in writing systems, which required more writing practice to memorize them, unlike English.” (S40)

“Grammatical structures are different, so it requires different ways of learning.” (S100)

“I have Chinese friends in the classroom, so I can practice with them. Unlike English, I watch movies.” (S112)

Their comments show their awareness of the differences in terms of writing systems and grammatical structures. Moreover, the fact that there are native Chinese-speaking students studying in the same program allows them to acquire the Chinese language through communication in daily life.

7. Discussion

The findings reveal that students frequently used learning strategies to cope with both English and Chinese at a high level. The close-ended questionnaire results indicated the strategies they rated the most frequent use were social strategies.

The possible explanation might be that these strategies consisting of asking speakers to slow down or repeat when students couldn't follow, asking native speakers to correct their mistakes, practicing speaking with peers, asking for assistance from native speakers, practicing forming questions with native speakers, and learning the culture of

the target language were what these students always practiced in the classroom. Moreover, their exposure to native English and Chinese teachers allows them to practice frequently in their regular classes, both inside and outside the classroom. Additionally, having native Chinese-speaking peers in the same program enables them to apply these learning strategies with their Chinese classmates. Furthermore, it might be possible to explain that the university's location in Phuket attracts foreign tourists, teachers, and non-Thai students. This could encourage students to use social strategies more frequently. In addition, the active learning environment at the university, where students are regularly encouraged to engage in discussions, pair work, and role-plays, might lead students to perceive social strategies as the most frequently used.

The findings of the current study align with Moeithaisong (2023), who revealed that Thai university students used social strategies most frequently to learn English, and with Wattanamolkul and Praparkarn (2021), who found that social strategies were the second most frequently used for learning Chinese. Although social strategies were not the most frequently used by the students in this study, it is noteworthy that they ranked second, following compensation strategies.

In contrast to the most frequently used strategies, the least utilized strategies for learning English (L2) were memory, and those for learning Chinese (L3) were cognitive. The possible explanation might be that even though students are aware that memory and cognitive strategies could promote learning of target languages (Saputro & Fauziati, 2019), they are not strategies they would like to employ if there are other strategies that allow them to learn in a less formal learning style. The results of the current studies are not concurrent with those of Arunreung et al. (2018), who found that Thai university learners indicated the least preference for cognitive strategies in learning English. Furthermore, the results of the current studies are not aligned with those of Wattanamolkul and Praparkarn (2021), whose study showed that Thai university learners preferred memory strategies the least in learning Chinese. These discrepancies could be attributed to individual differences and other contextual factors such as age, gender, and motivation (Charoento, 2017; Sukying, 2021), leading to varied and inconclusive strategies across different contexts.

Apart from the closed-ended questionnaire data, the findings derived from the open-ended questionnaire data present different preferred learning strategies. While the close-ended questionnaire data suggested social strategies as the most frequently used,

the open-ended questionnaire data show cognitive strategies as the most commonly employed for acquiring L2 and L3. Regarding their responses, activities like watching movies and listening to music, which are categorized as cognitive strategies, were the most preferable. This can be explained by the fact that cognitive strategies enable language learners to directly engage with language materials, thereby enhancing comprehension, practicing in authentic contexts, and improving formal structure and pronunciation (Saputro & Fauziati, 2019). Additionally, watching series may not create a sense of formal language learning, making it a less stressful but effective strategy. These findings are aligned with Korkmaz (2013) findings showing that learners taking two target languages simultaneously favored cognitive strategies. However, in their daily lives, students may actually rely more on cognitive strategies, such as engaging with media, playing English games, or watching English movies, to enhance their language skills independently. This could explain why Thai students employ these cognitive strategies, as they believe they significantly contribute to their learning. These findings are aligned with earlier studies by Suwanarak (2015) and Tieocharoen and Rimkeeratikul (2019), which found that Thai university students preferred social strategies to other strategies to learn English.

Despite these differences, the findings from the open-ended questionnaire supported the close-ended questionnaire in terms of social strategies. This might be because university students, as adult learners who are about to graduate, recognize the importance of mastering the target language for their future careers and understand the value of practice. These findings are consistent with Sung's (2011) study, which showed that Chinese learners who had studied two languages before starting their L3 more frequently used cognitive and social strategies than those who only knew one language.

Another finding is related to their similarities of learning strategies in learning two different languages. The findings suggest that Thai university students learning a third language—English from the West Germanic languages in the Indo-European language family and Chinese from the Sino-Tibetan family—shared similar learning strategies despite the linguistic differences between the two languages. The findings derived from the closed-ended questionnaire show no significant differences between the two languages, which are confirmed by their comments on the open-ended questionnaire.

The explanation might be that they perceive that in learning a foreign language, it is essential to learn vocabulary, sentence structures, and pronunciation. Moreover, this

could be explained by the preference for social strategies among Thai students, who are often encouraged to actively engage with native-speaking teachers and participate in active learning activities that boost their confidence and eagerness to practice their L3. Since language learning strategies are socially mediated and context-dependent (Habók & Magyar, 2018; Sukying, 2021; Tieocharoen & Rimkeeratikul, 2019), Thai university students exhibited similar strategies for learning both English and Chinese. The results are in line with Wichitwetchaphaisan et al. (2016), whose findings suggest that when students learn other languages, such as Chinese, Korean, Spanish, Russian, or even ASEAN languages, they tend to employ similar learning strategies to cope with all the new languages.

Another notable finding is the significant difference in the use of memory strategies between learning English (L2) and Chinese (L3), as indicated by the t-test results. Memory strategies involve linking prior knowledge with new information, practicing new vocabulary by constructing sentences, associating new words with images, recalling vocabulary by imagining situations where it might be used, and regularly reviewing the material (Oxford, 1990). This difference could be attributed to the unique nature of Chinese characters, which differ from their pronunciation, requiring greater effort in memorization and practice in writing. Additionally, since Chinese is a new language for most students, typically introduced at the university level, it demands more effort and time for revision compared to English, which all Thai students have been studying since the early years of school (Padermpach, 2017).

8. Implications

The findings of this study provide valuable insights for language teachers on the use of second and third language learning strategies.

Firstly, a key implication is that teachers should prioritize activities that enhance productive skills in speaking. The study highlighted that social strategies are the most commonly employed. Therefore, teachers could design learning activities such as role-plays and projects that encourage students to actively use the target language in communication.

Additionally, students tend to prefer learning in a fun and relaxed environment. The study revealed that most students enjoyed learning through films, music, or engaging

language programs on the internet. Incorporating instructional materials like video clips, short films, or music can capture students' interest and foster a positive attitude toward the target language. This approach also helps students learn about the culture and practical use of the language.

Furthermore, integrating technology can capture students' attention and boost their motivation for language learning. The study suggests that easy access to the internet allows students to learn the target language anytime and anywhere. Therefore, teachers could incorporate technology by designing lessons on digital platforms or assigning students to self-study on recommended websites.

Lastly, teachers should deliberately introduce language learning strategies to students. Since most students in the study reported using similar strategies, it could be beneficial for teachers to gradually introduce less commonly used strategies. This would broaden students' understanding of different strategies and give them opportunities to experiment with these approaches.

9. Limitations and Recommendations for Further Studies

Several limitations and recommendations for future research should be considered.

Firstly, other research instruments should be employed. This study primarily relied on questionnaire responses, so the strategies reported reflect the participants' perceptions at the time of their responses. Future research should explore whether participants actually use these or other strategies when learning foreign languages. Additionally, this study utilized only questionnaires. Future studies could incorporate other research methods, such as focus groups, think-aloud protocols, periodic self-reports, or self-reflection. These methods could provide deeper insights into why learners choose certain strategies and how they use them in different contexts.

Secondly, the short duration of this study is a limitation. To better understand the strategies students use to learn a target language, it would be valuable to conduct a longitudinal study or follow-up research to observe if their strategies change over time (Lancho Perea, 2021). Investigating whether the language learning strategies of students learning L2 and L3 simultaneously remain consistent or evolve as time progresses would be insightful. The current study included students from their first to fourth year. As previous research by Lancho Perea (2021) has shown that language learning strategies

can change over time, studying these strategies across different years could lead to more comprehensive analyses.

Thirdly, comparing the strategies used by students with high and low proficiency in English as L2 and an additional language (L3) should be explored. The present study did not categorize students by their language proficiency, focusing instead on their language programs. However, several researchers, including Charoento (2017), Grainger (2012), and Sukying (2021), suggest that various factors influence learners' choice of strategies. They recommend conducting a replicated study to further investigate these differences.

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