

SPELLING ERRORS IN THAI MADE BY CHINESE AND LAO STUDENTS SPEAKING THAI AS A
FOREIGN LANGUAGE



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บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
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ข้อผิดพลาดด้านการสะกดคำไทยของนักศึกษาจีนและนักศึกษาลาวที่พูดภาษาไทยเป็น
ภาษาต่างประเทศ



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
สาขาวิชาเอเชียตะวันออกเฉียงใต้ศึกษา (สหสาขาวิชา)
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การเรียนรู้วิธีการสะกดคำที่ถูกต้องมีความสำคัญอย่างยิ่งในการเรียนภาษาต่างประเทศ เนื่องจากการสะกดที่ถูกต้องเป็นพื้นฐานของการสื่อสารอย่างมีประสิทธิภาพ การสะกดคำภาษาไทยเป็นสิ่งท้าทายสำหรับเจ้าของภาษาและผู้เรียนชาวต่างประเทศ อย่างไรก็ตาม การศึกษาที่เกี่ยวข้องกับข้อผิดพลาดด้านการสะกดภาษาไทยของผู้เรียนต่างประเทสนั้นยังมีอยู่น้อย ดังนั้น งานวิจัยนี้มุ่งวิเคราะห์รูปแบบและสาเหตุของข้อผิดพลาดด้านการสะกดคำไทยของนักศึกษาจีนและนักศึกษาลาวที่พูดภาษาไทยเป็นภาษาต่างประเทศ ข้อมูลที่ใช้ในการวิเคราะห์หามาจากการเขียนบทความและการเขียนตามคำบอกของนักศึกษาจีนและลาว กลุ่มละ ๓๐ คน และยังมีนักศึกษาคนไทยจำนวน ๓๐ คน ร่วมในการวิจัยครั้งนี้ด้วยเพื่อเป็นกลุ่มพื้นฐานสำหรับการเปรียบเทียบ ผลการวิเคราะห์พบว่าปัญหาหลักของนักศึกษาจีนคือการสะกดสระไทย นักศึกษาลาวมีปัญหาสะกดพยัญชนะไทยผิดมากกว่า สำหรับนักศึกษาจีน ความซับซ้อนของภาษาไทยและการแทรกแซงจากระบบเสียงของภาษาจีนเป็นสาเหตุหลักที่ทำให้นักศึกษาจีนสะกดคำไทยผิดพลาด ส่วนกลุ่มนักศึกษาลาว นอกจากข้อผิดพลาดเล็กน้อยที่เกิดจากความไม่ตั้งใจ ข้อผิดพลาดส่วนใหญ่เกิดจากความซับซ้อนของภาษาไทย การแทรกแซงจากระบบเสียงของภาษาลาว และความแตกต่างระหว่างระบบการเขียนของภาษาลาวกับภาษาไทย ผลการศึกษานี้แสดงให้เห็นว่าผู้เรียนชาวต่างชาติสะกดคำภาษาไทยผิดเพราะความซับซ้อนของภาษาไทยมากกว่าการแทรกแซงของภาษาแม่ของผู้เรียน

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When learning a foreign language, it is important to learn how to accurately spell as it is crucial for communication. To accurately spell in the Thai language is challenging for both native and foreign learners of Thai. However, there are few studies that address the spelling errors made by foreign learners of Thai. Therefore, the purpose of this study is to analyze the patterns and causes of spelling errors made by Chinese and Lao students speaking Thai as a foreign language. In order to gather data for this analysis, thirty Chinese students and thirty Lao students took part in a composition writing and dictation exercise. A group of Thai students was also involved in the study as a basic group for comparison. The results suggest that the main spelling problem for Chinese students is spelling Thai vowels, whereas Lao students tend to misspell more Thai initial consonants. For Chinese students, the complexity of the Thai writing system and the interference from Chinese phonology are found to be the main causes of their spelling errors. As for the Lao students, apart from a few idiosyncratic errors, most of the errors are found to result from complexity of the Thai writing system, interference from Lao phonology, and differences between the Lao and Thai writing systems. The findings of this study imply that foreign learners of Thai made more intralingual errors than interlingual errors in spelling.

Field of Study: Southeast Asian Studies Student's Signature

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Chapter 1 Introduction

1.1 Rationale

At present, the Thai language is widely used in mainland Southeast Asia due to the social and economic influence of Thailand on its neighboring countries. With the integration of the ASEAN Community, the relationships among ASEAN member countries also get increasingly interconnected. The role of language has been emphasized in this process. Thai is also popularly learned by Chinese who are interested in Thailand and its culture as evidence by the fact that Thailand is one of the most popular destinations for Chinese tourists. According to the statistics collected by the China Daily¹, the number of Chinese going to Thailand for sightseeing has already reached 8.8 million in 2016 and the number is predicted to be 9.0-9.5 million in 2017.

Indeed, Thailand is one of the most important industrial and agricultural production bases in the world. Due to the country's economic accomplishments in recent decades, the role of Thailand in the world market has received focused attention from the rest of the world in the tide of economic globalization. Moreover, Thailand is also one of the most popular tourist destinations, attracting over 30 million tourists in 2016 from around the world². The development of Thailand has endowed the Thai language with much importance and usefulness. According to Plaengson (2017, 17), the number of foreigners who learn the Thai language has continually grown in recent years. Learning Thai not only provides people with the opportunity to integrate into Thai society and experience unique Thai culture, it also increases their chance of employment and business in this broad market with a high foreground.

¹ China Daily is an English daily newspaper published in China, which is also one of the most popular English-language newspaper media in China.

² The number was retrieved from the official website of the Ministry of Tourism and Sports of Thailand, http://www.mots.go.th/mots_en57/main.php?filename=index.

This thesis concentrates on Chinese learning Thai because the relationship and cooperation between China and Thailand has increased in recent decades. In 2013, the Chinese government proposed the “One Belt, One Road Initiative” in order to promote connectivity and cooperation between Asian and European countries, and ensuring that the bilateral relationship between the two countries escalates to a new level. According to Shen and Xia (2018), with the implementation on the “One Belt, One Road” policy, the demand for foreign language ability has increased. Various methods and measures are taken by the Chinese government to promote the cultivation of language talents. Thailand, as an essential country in the Maritime Silk Road, is attached with great significance to this development strategy. The Thai language is definitely one of the foreign languages which get support from the Chinese government. On the one hand, more and more universities established the Thai language program with the help of the Chinese government. According to the statistics of the Chinese Ministry of Education in 2015, the number of universities with the Thai language program has already reached over fifty³. According to Ya (2010), some universities not only established the Thai language program, but also connected the Thai language with other disciplines, such as finance, tourism management, and media studies. In addition, the China Scholarship Council (CSC) also provides different types of scholarships for Chinese students to take some courses or further their study in Thailand. It can be claimed that the Thai language is becoming one of the most popular and practical foreign languages among Chinese students due to the development of Thailand and the usefulness of the Thai language.

Apart from Chinese students learning Thai, this thesis also focuses on Lao students for certain reasons. Thailand and Laos are neighboring countries sharing a long borderline, which provides the conditions for cooperation in terms of politics, economy and culture between the two countries. According to Kraft (2000), as one of the most important economic entities in the ASEAN community, Thailand plays a stimulating role in ASEAN’s economic growth and development in many aspects which will definitely benefit its neighboring countries. Laos is a newly developing country with

³ The number was retrieved from the official website of the China Scholarship Council (CSC), <http://www.csc.edu.cn>.

huge development potential and bright prospects, which will therefore benefit from the further development of Thailand, especially in the aspects of infrastructure construction and industrial acceptance. Therefore, it is of great importance that Lao people master the Thai language. In order to promote the cooperation of human resource development between Thailand and Laos, the Thai government consistently provides scholarships for Lao students to pursue advanced study in Thailand, including bachelor and master level study (Yooyen 1997). Therefore, it is necessary for Lao students to be proficient in Thai if they wish to further their study in Thailand. Actually, the Thai language is already extensively used in Laos, including across a wide spread of Thai TV programs and radios or the broad application of Thai books and magazines (Higbie and Thinsan n.d.), which ensures that Lao students have more of an advantage than students from other countries in learning Thai organically.

Regarding the topic of this study, it concerns spelling, which is important in learning how to write in both native and foreign languages. It is a symbol of literacy. However, it seems to receive very little attention in language teaching and learning. According to Brosh (2015), most scholars tend to pay more attention to the four main skills in language learning; namely, listening, writing, reading, and speaking. Spelling, an important component of writing, is always seen as a secondary skill or sub-skill in learning a language so that it is allocated with limited instructional time and emphasis (Brown 2007). If spelling errors are found, they may be considered as carelessness and incompetence of writers and will not get further explanation and analysis in most cases. Actually, spelling is equally important as other skills in language learning. Accurate spelling is considered to be a significant factor in improving the quality of written texts (Puranik et al. 2012). Bean and Bouffler (1987) claim that correct spelling has become the ticket to the literacy club, the heir to the traditions and scholarly world of print.

By contrast, spelling errors always convey wrong information and sometimes can be obstacles for effective communication. Cronnell (1979, 202) strongly criticizes incorrect spelling as “serious social error, making a person illiterate.” Graham and Harris (2005) state that inaccurate spelling often sends a message that the writer is careless or less

intelligent than others. Not only do spelling errors damage writer's personal image, but also affect communication among individuals.

Even though spelling errors have already attracted some attention from scholars and researchers, related studies are still in infancy. Among the limited studies dealing with spelling errors, most of the researchers choose to study spelling errors in English made by EFL or ESL learners speaking various native languages, including Arabic, Japanese, African American, Korean, and etc. (Gunion 2012, Kim 2001, Mahmoud 2013, Treiman and Bowman 2015). It is proved that learners' existing skills and knowledge of the first language tend to play an important role in the process of spelling English. As a result, some of the spelling errors made by EFL or ESL learners can be traced back to the influence of their native languages (Born 1985, Luelsdorff 1990, Russak and Frangman 2014, Subhi and Yasn 2015, Sun-Alperin and Wang 2008). In other words, a negative transfer from native language to foreign language occurs. At the same time, another group of scholars and researchers try to emphasize the importance of the target language itself (Kim 2001, Richards 1971, Sattayatham and Honsa 2007). They claim that learners of English make spelling errors not only because language transfer happens, some difficulties of English also play a very important role.

Compared to English, data in spelling acquisition from other languages are quite scarce (Dich 2011). Some conclusions derived from spelling errors in English have not been generalized in other languages. The Thai language is one of the languages which get insufficient attention. Actually, the distinctive writing system of Thai makes it an interesting case to study in terms of spelling. Winkler and Iemwanthong (2010, 1022), point out that "Thai has an alphabetic script, which also shares properties with syllable scripts, as it has implicit vowels for some consonants." Therefore, as an alphabetic language, the Thai writing system is not totally transparent, since there are many homophonic and unpronounced letters caused by borrowing words from other languages, such as Pali, Sanskrit, Khmer, and others. To some extent, all these characteristics make the Thai writing system complicated and opaque. Thus, it deserves investigation in terms of spelling errors.

In short, the Thai language is enjoying greater popularity among Chinese students and also closely connected with the daily lives of Lao people. As a foreign language, it is generally regarded as having a complicated writing system, and difficulty in spelling Thai words cannot be avoided. For these reasons, the topic of Chinese and Lao students' spelling Thai words is worth studying. Besides, my review of literature reveals that there has been very little research in this area. Therefore, the present study aims to fill the knowledge gap by analyzing the patterns and causes of spelling errors in Thai that are made by Chinese and Lao students speaking Thai as a foreign language.

1.2 Objectives

The objectives of the present are as follows:

1.2.1 To analyze the patterns of the spelling errors in Thai made by Chinese and Lao students speaking Thai as a foreign language.

1.2.2 To find out the underlying factors that cause the spelling errors made by the two groups of students.

1.2.3 To compare patterns and causes of the spelling errors made by the two groups of students.

1.3 Research questions

The present study aims to answer the three following research questions:

1.3.1 What are the major patterns of the spelling errors made by Chinese and Lao students speaking Thai as a foreign language?

1.3.2 What are the potential causes of the errors made by the two groups of students?

1.3.3 Whether Chinese students or Lao students will make fewer spelling errors?

1.4 Hypotheses

1.4.1 The patterns of the spelling errors made by the two groups of students mainly include spelling errors in vowel letters, initial consonant letters, final consonant letters, unpronounced letters, and tone markers.

1.4.2 There are three main causes of the spelling errors: 1) complexity of the Thai writing system; 2) interference from the phonological system of students' native languages; 3) differences between the Thai writing system and Chinese or Lao writing system;

1.4.3 Chinese students make fewer spelling errors than Lao students. Spelling, as a complicated skill in using Thai, needs a great quantity of specialized explanation and training. Chinese students' Thai language is acquired in classrooms, which means that they have more opportunities to obtain the academic training from professional instructors; however, the acquisition of Thai language among Lao students is in a more natural way, which will not be able to provide them some guidance and explanation related to the Thai language spelling.

1.5 Contribution and usefulness of the study

1.5.1 The findings of the study will be useful to foreign learners of Thai. They will help them to realize their spelling level and to avoid the fossilization in their spelling.

1.5.2 The present study will benefit Thai language instructors as well. It will make them become more aware of some frequently misspelled words and adjust teaching strategies in order to help students to improve their spelling skill in Thai.

1.5.3 The study will also make a contribution to the further studies focusing on the cross-linguistic research between Laos and Thailand. The Thai language is extensively used in Laos, whereas the related studies are rare. The findings of the present study will reveal the problems of Lao people when writing Thai, which will provide some empirical evidence to the researchers who are keen to study the use of the Thai language in Laos.

1.6 Limitation of the study

The major limitation of the present study comes from the research design. The study was conducted under a controlled environment. It has been proved that foreign language learners commonly use avoidance strategy when taking part in language research due to their anxiety or nonconfidence in using foreign languages (Aida 1994, Daly 1977, Stenson 1983). Even though the participants were not informed that their output would be checked for spelling errors, some of them might still avoid using some vocabularies that they were not familiar with in the composition writing. They might even rush to finish their writing within allotted time. As a consequence, some possible spelling errors may not be found in the study.

1.7 Structure of the thesis

This thesis is organized into seven chapters:

Chapter 1 outlines the general introduction of the thesis, mainly including rationale, objectives, research questions, hypotheses, significance, and limitation of the present study.

Chapter 2 provides a review of literature related to some relevant theories and current studies regarding spelling errors in foreign languages, including English, Thai, and other languages.

Chapter 3 introduces the methodology used in the study. The participants, data collection process, and data analysis process are explained in detail.

Chapter 4 explains spelling error classification and common patterns of spelling errors made by both native speakers and foreign learners of Thai.

Chapter 5 deals with patterns of the spelling errors made by Chinese, Lao, and Thai students, respectively. Moreover, patterns of these different groups of participants are compared with one another.

Chapter 6 analyzes the potential causes of spelling errors made by the students using different native languages.

Chapter 7 presents the summary of the findings, some pedagogical implications, and suggestions for further studies.



Chapter 2 Literature Review

Due to the fact that spelling is a crucial skill in the civilized society and spelling errors could greatly influence our personal image, spelling errors have attracted attention from scholars and researchers with different academic backgrounds. Among the studies related to spelling errors, English is the predominant target language, whereas the studies focusing on spelling errors in other languages are rare, including Thai.

In this chapter, I will present a review of past studies related to spelling errors in both English and Thai. In addition, diverse theories regarding spelling errors in foreign languages were put forward by various scholars in different periods, which will be useful to the present study. Hence, these theories will be reviewed as well. Therefore, in the following, I will present the summary of the literature review in three sections; namely, 1) foreign learners' spelling errors in English; 2) spelling errors in Thai; 3) the theories of spelling errors in foreign languages.

2.1 Foreign learners' spelling errors in English

According to Caravolas (2004), cross-linguistic research in spelling is still in its infancy and it is a quite new of inquiry (Dich 2011). Some scholars have started to fill this gap. The first target language of them is English because of its international language status. Therefore, the studies conducted on English spelling errors are relatively abundant compared to other languages. The literature related to spelling errors in English made by foreign learners with diverse native languages will be firstly discussed in this section.

Due to the fact that English and Arabic have completely different scripts and spelling systems (Szczerbik 2010), many researchers consider the students from Arabic countries to be good sources of spelling errors in English (Subhi and Yasn 2015). Fender (2008) conducted a study to find the spelling errors among Arabic students and non-Arabic students. The findings suggest that Arabic students made more spelling errors than non-Arabic students, which reveals that Arabic students' English spelling ability tend to be lower than their non-Arabic counterparts. Similarly, Subhi

and Yasn (2015) found that up to 31 percent of the English words were misspelled by thirty Iraq students, which also demonstrates their poor English spelling skills. Alhaisoni, Al-Zuoud, and Gaudel (2015) analyzed the spelling errors in English of Saudi students enrolled in an intensive English language program. From totally 122 participants, he found 1189 errors altogether and following Cook (1999) he classified these errors into four categories; namely, omission, substitution, insertion, and transposition. Omission was found to contribute the maximum proportion. Some students omitted some parts of the words, such as *<contry> for <country>, in which <u> was omitted. The substitution was the second most frequent errors in this study, such as substituting <s> for <c> in the misspelled word *<nice>. The insertion came from the overgeneralization of target language, such as the insertion of <t> in *<coatch> for <coach>. Errors of transposition or misordering were the least frequent errors and the misordering of the vowel <ie> was the most common error, such as *<friend> for <friend>.

According to Alhaisoni, Al-Zuoud, and Gaudel (2015), there are two main causes of these errors: the first is the interference of spellers' first language; the second is the low proficiency in English. It is proved in another research done by Golshan and Reigani (2015), in which English errors of forty Iranian female students were analyzed and classified according to Cook's classification. The study also demonstrates that the influence of the first language and low proficiency on English are the two main causes of spelling errors. Mahmoud (2013) provides a new way to classify spelling errors in English: a two-way analysis, in which the spelling errors made by thirty Arabic students were classified into interlingual errors, which refer to the errors caused by the negative transfer from learners' native languages, and intralingual errors, which mean the errors caused by the difficulties of the foreign languages. Among all the errors, the intralingual errors (74 percent) own a bigger proportion than interlingual errors (26 percent), which reveals that the complexity of English itself caused more spelling errors rather than the influence from students' native language.

In addition, other Asian English learners also attract some attention from researchers. Gunion (2012) did a survey about the English spelling errors of fifteen Japanese students enrolled full-time at Newcastle University. The results show that participants

made the most spelling errors in omission and some particular characteristics of Japanese resulted in some spelling errors, for example, the consonant + vowel (C+V) in Japanese syllables caused Japanese students to insert an extra vowel when they encounter English consonant clusters. Darett (2012) systematically analyzed the English spelling errors made by Thai native speakers, eight major types of errors were found; namely, insertion, omission, substitution, transposition, grapheme substitution, word space, capital letters and others. Omission was the most frequent type, which accounted for 27.97 percent of all the errors. The spelling errors were caused by nine factors; i.e., learners' wrong pronunciation; differences between the Thai and English consonant sound systems; homophony; linking some sounds to an easy high frequent word, such as linking the <ere> in <here> to make the errors like *<chere> for <cheer>; differences between the Thai and English writing system; differences between grapheme and phoneme correspondence in Thai and English; confusion in spelling; the silent final <e> in English; overgeneralization of English spelling rules. Likewise, Woralak (2013) also analyzed the spelling errors in English made by 31 first-year Thai university students by categorizing those errors into nine types: consonant substitution, vowel substitution, space inaccuracy, confusion in writing scripts, inaccurate double consonants, inflectional endings, letter reversals, vowel omission, and consonant omission. Various causes were taken into consideration, including differences between the English and the Thai writing systems, Thai students' wrong pronunciation in English, lack of morphological knowledge, and limited knowledge of orthography or spelling.

Actually, not all researchers considered the whole word as a research unit. Some of them focus on certain parts of a word in order to get a closer look at the errors. By analyzing the spelling ability of Arabic students in monosyllabic English words, Al-Busaidi and Al-Saqqaf (2015) prove that short vowel sounds are easier than both long vowel sounds and diphthongs. Sun-Alperin and Wang (2008) examined 53 Spanish-speaking children's spelling errors in English vowels and the findings suggest that the children committed significantly more vowel spelling errors that are related to the Spanish orthography. Apart from vowels, English consonants seem to be another issue which interests some researchers. Allaith and Joshi (2011) examined the spelling

performance of English consonants among the students whose first language was Arabic. They found that The Arabic students were confused more with the consonant sounds /b/, /p/, and /v/. Another study conducted by Treiman and Bowman (2015) proves that Africa-American children have more difficulty in spelling the English words with /d/ as the final consonant sound; for example, they frequently produced such an error as *<salat> for <salad>.

2.2 Spelling errors in Thai

Due to the essential role of Thailand in Southeast Asia, an increasing number of foreigners have chosen Thai as their foreign language (Wilairattanakul and Iemjimda 2011). However, studies on the spelling errors in Thai are very inadequate, and researchers seem to shed more light on the errors produced by native Thai speakers rather than foreign learners of Thai. Moreover, these studies also include other errors in students' writing besides spelling errors, such as grammatical errors, semantic errors, syntactic errors (Pramot Na Ayudhya 1976, Tanamee 1998, Thandawanich 2015).

Pramot Na Ayudhya (1976) analyzed the errors in the writing of the second and third-grade students in the Faculty of Arts, Chulalongkorn University. The findings show that students made errors concerning word usage, sentence structure, word meanings, and the silent marker. Some underlying causes were also discussed: overgeneralization, the influence from Pali and Sanskrit, confusion about the meaning of words, and poor understanding of standards in using Thai. Thow28j7 analyzed the errors in academic writing produced by Thai students in Burapha University and categorized the errors into three groups: content, language usage, and format. When analyzing the underlying causes, disregarding the context, ignorance about provenance and the meaning of words, the research concluded that the errors were caused by overgeneralization, misuse of combination of words, and loan words. Khrutmuang (2014) collected the often-misspelled words from students' assignments provided from 25 teachers and analyzed a total of 215 words that were often misspelled by Thai students, such as

<ความสุข> /p^hǎ:sùk/ ‘happiness’, <ปราภกฏ> /pra:kòt/ ‘observe’, <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’.

In terms of spelling errors in Thai made by foreign learners, it seems that Chinese students are the target samples of many researchers. However, their studies also concern more about writing as one of the main skills of learning a foreign language, rather than specifically focus on spelling. Bannatham (2012) studied Chinese students’ writing errors in Thai including spelling, word usage, sentence structure, and punctuation. She found that the highest number of errors fell into the spelling errors, which showed spelling was a big challenge for Chinese students when learning Thai. Likewise, Puttamata (2011) collected 132 pieces of Thai composition of twenty-two Chinese exchange students in order to find out the problems in their writing. Six categories of writing errors were found; namely, position of vowels and tone markers, application of the silent marker, word choices, sentence formation, and space and paragraph organization. Wilairattanakul and Iemjimda (2011) tested the spelling skills of sixty Chinese students who were learning Thai as a foreign language and designed exercises for improving their spelling skills. After the training, the spelling skills of the Chinese students improved significantly. Similarly, Zhang (2016) conducted a similar study about 31 Chinese students’ spelling errors in Thai, and analogous findings were found: the training courses worked well in improving the students’ spelling skills. The attitude of the participants towards the training courses was also examined by questionnaires and the students had highly positive attitudes towards the exercises.

Moreover, there are also a few research works that address the relationship between Thai and Lao. Yooyen (1997) did a contrastive study to analyze the differences between the Thai and Lao phonological systems. The comparison shows that there are 21 consonant phonemes in Thai but 20 consonant phonemes in Lao. /t^h/ and /r/ occur only in Thai while the consonant /ɲ/ occurs only in Lao. Moreover, some shared phonemes in Thai and Lao sometimes have different usage. Apart from that, she also collected some spelling errors in Thai made by 38 Lao students studying in the Intensive Thai Project at Kasetsart University. The findings show that Lao students have problems in spelling Thai consonants, vowels, tone markers, and the silent marker in Thai. However, the frequencies and causes of spelling errors are not

provided. Likewise, a similar study dealing with Thai students spelling Lao was conducted by Chanthao and Unthanon (2007) The spelling errors in Lao made by some Thai students studying the Lao language were analyzed and classified into different types according to phonological features of Lao, mainly including errors in consonants, vowels, and tone markers. Four causes were found to explain the errors; namely, misusing words in Thai northeastern dialect, lack of knowledge of some Lao vocabularies, misarticulation of vowels or tones and unfamiliarity with the Lao orthographic rules.

2.3 The theories of spelling errors in foreign languages

After scholars started to pay attention to the errors in foreign language learning in 1940's, the topic in regard to spelling errors has been a quite controversial subject (Heydari and Bagheri 2012). In the following sections, I will try to sort out the theories related to the errors made by foreign learners.

2.3.1 The development of theories related to errors in foreign languages

In the 1940s and 1950s, behaviorism dominated language learning and teaching. It was based on the principle that the difficulties in learning foreign languages depended on the extent how much the foreign language was different from or similar to the learner's native language. Based on the book written by Fries (1945) entitled *Learning English as a Foreign Language*, Lado (1957, 1-2) proposed the Contrastive Analysis Hypothesis, which originated from his significant book entitled *Linguistics Across Culture*:

In the comparison between native and foreign languages lies the key to ease or difficulty in foreign language learning. Those elements that are similar to (the learners') native language will be simple for him, and those elements that are different will be difficult.

According to this hypothesis, "the level of difficulty experienced by the learners will be directly related to the degree of linguistic differences between L1 and L2" (Lado 1957, 23) When the foreign language was similar or identical to learners' native language, a

positive transfer would happen, which could promote foreign language learning. By contrast, if two languages were different, a negative transfer would hinder the foreign language learning. When some structures of foreign language and native language have no relationship, zero transfer will occur. The procedures of conducting Contrastive Analysis were summarized by Whitman (1970, 191) as follows:

- 1) determining the two languages, native language and foreign language, and writing formal description of them;
- 2) picking forms from the description for contrast;
- 3) making a contrast of the forms chosen;
- 4) making the prediction of difficulty through the contrast.

Many researchers conducted various studies to prove the validity of the hypothesis and many of them focused on the pronunciation and phonological interference (Yang 1992). Weinreich (1979) compared the /θ/ and /ð/ sounds pronounced by French and Russian speakers respectively. He found that French speakers tended to pronounce /θ/ and /ð/ as /s/ and /z/ while Russian speakers used /t/ and /d/ to replace /θ/ and /ð/, respectively. Lehn and Slager (1959) proved that Arabic speakers of English had difficulty in pronouncing clusters clearly since there are no such consonant sequences existing in Arabic. Furthermore, proponents of this hypothesis (Stockwell, Bowen, and Martin 1965) advocated comparing the dissimilarities and similarities of two languages as well as setting up the hierarchy of the difficulty in order to predict the learners' difficulties and errors, from which we can see that the Contrastive Analysis Hypothesis realizes that learners' native language plays an important role in foreign language learning; however, they seem to exaggerate the influence of native language. Wardhaugh (1970, 125) criticized the Contrastive Analysis to be "unrealistic and impracticable". James (1992) stated that it was impossible to do an all-around contrastive analysis between two languages. In practice, not all the similarities between native language and foreign language are easy to master. Likewise, not all the differences are difficult for foreign language learners and the choices of compared ones could result from the subjectivity of researchers themselves. Cai and Lee (2015) proved the shortcomings of the Contrastive Analysis Hypothesis by comparing the differences between Mandarin and Thai in order to predict the pronunciation difficulty

Thai students had in learning Mandarin Chinese. The results showed that some dissimilarities between Thai and Mandarin did not cause difficulty, whereas some similarities sharing by Thai and Mandarin did. Likewise, Rahimpour and Dovaise (2011, 81) analyzed the phonological difficulties of Kurdish people speaking English as a foreign language by contrasting the phonological systems of Kurdish and English. The results showed that “neither all the differences cause problems, nor all problems happen because of the differences”. Al-Khresheh (2016) criticizes that the Contrastive Analysis only focuses on the potential errors rather than the actual errors committed by foreign language learners, which cannot give an objective interpretation of errors. Therefore, the shortcomings of the Contrastive Analysis called for an alternative approach to analyze the errors in foreign language learning.

Later in the 1970s, the Creative Construction Hypothesis was proposed by Dulay and Burt (1974). According to the Creative Construction Hypothesis, the skill of learning a new language was born by nature rather than relied on any transfer and the native language of a learner does not have much influence on the acquisition of another language. Moreover, the Creative Construction Hypothesis holds that there is not much difference between first and second language acquisition. However, as mentioned earlier, when we learn a new language, our existing knowledge will play an important role in shaping our success and failure (Dich 2011). In the Creative Construction Hypothesis, the role of native language was totally denied.

In the late 1970s, in order to find out more causes of spelling errors in foreign languages, scholars started to focus more on the errors themselves rather than to predict possible errors. Given this, the Error Analysis, deriving from Corder (1967), was used as an alternative approach for the Contrastive Analysis in analyzing the errors committed by foreign language learners. The shift from the Contrastive Analysis to the Error Analysis can be seen as “a shift from potential errors to the actual committed ones”. It is a process of identifying, categorizing, and explaining the errors committed by foreign language learners, which is considered by Mahmoodzadeh (2012) as the most appropriate tool for analyzing learners’ errors. Advocates of the Error Analysis start from foreign language learners’ errors to trace back to the causes of writing errors. They believe that the errors made by foreign language learners cannot only be

caused by the negative transfer from their native languages, but they may also be caused due to the intralingual factors from the foreign languages themselves. The Error Analysis has two main objectives: one theoretical and the other applied (Corder 1973). The theoretical objective is to understand the process of foreign language learning. On the other hand, the applied objective is to provide pedagogical implication to instructors and curriculum designers to promote foreign language teaching. Ellis (1994, 48) put forward the four stages of conducting Error Analysis; namely, “collection of a sample of learner language, identification of errors, description of errors, and explanation of errors.”

Based on the Error Analysis, many researchers tried to investigate errors committed by foreign language learners from a new perspective. Richards (1971) divided the sources of writing errors into three categories. The first was interference errors, which resulted from learners' mother languages. The second was called intralingual errors, which reflected the incorrect generalization within the foreign languages. The third category was developmental errors, which occurred when learners used their limited knowledge of foreign languages in their learning. Later, intralingual errors and developmental errors were considered to be of the same type, which referred to the errors resulting from the inadequate knowledge of the foreign languages (Schachter and Celce-Murcia 1977). After that, more causes of writing errors were taken into consideration. Stenson (1983) emphasized the important role of teachers and classroom atmosphere. Later, this kind of source was defined by James (1998, 191) as “material-induced errors, teacher-talk induced errors, and exercise-based induced errors”.

In term of the relationship between Contrastive Analysis and Error Analysis, Hammerly (1982, 145) provide a clear explanation:

In recent years, it has been the fashion to reject contrastive analysis in favor of error analysis. In fact, both types of studies complement each other. Contrastive analysis can result in more and less accurate predictions and can often provide an explanation for the errors observed. Error analysis can help to confirm or reject the predictions based on contrastive

analysis as well as ‘fine-tune’ the contrastive analysis so that it will be more accurate; it can also help determine the nature and extent of errors not due to differences between the NL and FL.

2.3.2 The literature on errors related to language transfer (interlingual errors)

Language transfer from native language to foreign language has been a quite controversial topic in foreign language learning and teaching. In practice, language transfer has attracted people from different academic fields to conduct research in various languages. Schachter and Celce-Murcia (1977, 443) defined interlingual errors as the errors “caused by the influence of the learner’s mother tongue on production of the target language in presumably those areas where languages clearly differ”. When talking about language transfer, it is always divided into a positive transfer, which helps foreign language learning, and negative transfer, which hinders foreign language learning. The errors caused by the transfer from native language to foreign language are called interlingual errors. Zobl (1980, 54) summarizes the characteristics of interlingual errors as:

- 1) interference produces errors that are not like developmental;
- 2) learners depend on the first language as crutch at low level of the second language proficiency;
- 3) learners use the first language to hypothesize about the second language;
- 4) learners are unable to separate the first language from the second language;
- 5) learners’ errors are due to the first language habits;
- 6) learners employ an interlingual generalization.

When native language and foreign language share many similarities, for example, both native language and foreign language are alphabetic languages, a positive language transfer usually happens. It is because learners already master some phoneme-grapheme correspondences from their native language. When learning another alphabetic language, the phonological skills will play a positive role, which means that the transfer from native language helps learners to master another foreign language. For instance, Schwartz et al. (2007) compared the English spelling skills of two groups

of people: the first group was Hebrew-Russian bilinguals; the second group was monolinguals (Hebrew only). Obviously, the most significant variable between the two groups of informants was the Russian literacy. The bilinguals performed better than the samples who only spoke Hebrew. In this study, the bilingual transferred the phonological skills from Russian, as alphabetic language, to English spelling. While the Hebrew monolinguals lacked such skills because Hebrew is not an alphabetic orthography. In this case, a positive transfer from Russian to English made Hebrew-Russian bilinguals did better than their Hebrew monolinguals counterparts. However, negative transfer, which is the transfer from native language that hinders the foreign language learning, could also happen in two alphabetic languages. According to Luelsdorff (1990), German students who learn English as a foreign language misspelled <station> into *<steschen> because /s/ is correspondent with <sch> in German.

Even though both native language and foreign language are alphabetic languages, a negative transfer could also happen because the phoneme-grapheme correspondence rules of languages are different (Dich 2011). When Spanish students spelled English words, they tended to use the sound-out way, which reflected the differences between English and Spanish: the phoneme-grapheme correspondence in Spanish is stricter than English (Durgunoğlu 2002, Fashola et al. 1996). Russak and Frangman (2014) found that although Hebrew and Arabic had high linguistic proximity as both Hebrew and Arabic are Semitic languages and consonantal orthography, native Hebrew speakers still made many spelling errors in Arabic because of the interference from shared linguistic elements.

Some researchers argued for a negative transfer effect from a non-alphabetic native language to an alphabetic foreign language. For instance, Chinese students depend more on visual strategy (rote memorization) developed from their native language when spelling English words (Holm and Dodd 1996). Chinese is meaning-based language and when Chinese students write Chinese words, they tend to use rote memorization to remember words. In the research by Holm and Dodd (1996), Chinese students transferred this strategy into spelling English words, which made them perform worse than the Vietnamese counterparts, whose native language was also alphabetic language.

2.3.3 The studies on intralingual errors

When researchers analyze the causes of errors in foreign languages, the language transfer seems not to be the only factor that is to blame. The complicated system of foreign language itself also causes many errors, which are considered as intralingual errors, which are independent of learners' mother tongues (Jiang 2009). These errors can be found to be similar to the errors committed by the native speakers of the target language (Corder 1967). Zobl and Liceras (1994, 55) claim that intralingual errors have the following characteristics:

- 1) errors are similar to those made by native speakers;
- 2) learners create similar rules to those of native speakers;
- 3) errors reflect learners' competence at a certain developmental stage;
- 4) learners try to construct hypothesis about the second language;
- 5) errors originate from the second language;
- 6) errors reflect general characteristics of acquiring language rules;
- 7) learners use the strategies of simplification, generalization and reduction of grammatical redundancy.

Sattayatham and Honsa (2007) emphasize the importance of intralingual errors and even state that the errors coming from the language transfer is very minimal and only 3-25 percent of errors can be explained by the language transfer. Kim (2001) collected thirty writing samples from the Korean students enrolled in TOIEC class and summarized their writing errors. According to the data, the most frequent errors made by the Korean students included tenses, incorrect use of prepositions, incorrect use of articles. Among the errors, intralingual errors had a greater proportion. Sattayatham and Honsa (2007) reached the same conclusion by analyzing the English errors made by Thai students in their translation works. They summarized the English errors made by 237 Thai students at Mahidol University. The errors were categorized into two types: interlingual errors and intralingual errors. Similarly, more errors could be attributed to intralingual errors.

To sum up, both the language transfer and difficulties of foreign languages cause errors in foreign language skills, including spelling. On the one hand, a language

transfer can happen whenever native language and foreign share some similarities or they are totally different. Both positive and negative transfer play an important role in foreign language spelling. On the other hand, the difficulties in the foreign languages cannot be ignored either. The theories reviewed above will be useful to my analysis of Chinese students' and Lao students' errors in spelling Thai. My study will be the first that deals with the problem in detail, both about the characteristics of the errors themselves and about the factors that bring about the errors. From the literature review, there has been no study that covers the problem.



Chapter 3 Methodology

This chapter presents the methodology used in the study, which deals with how the research was designed (3.1), who participated in the study (3.2), how the data was collected (3.3), and how it was analyzed (3.4).

The present study adopts both quantitative and qualitative research methods. When showing the frequency of spelling errors, the quantitative analysis was used. Statistics, tables, and figures are used in presenting the results of the analysis of each group's numbers of errors in spelling and the frequency of each type of errors. The analysis of the causes of spelling errors utilized the qualitative method.

3.1 Research design

3.1.1 Pilot study

Before conducting the research, a pilot study was done in order to test the feasibility of the dictation method. A forty-word dictation test was conducted at Xi'an International Studies University, Xi'an City, Shaanxi Province, China. The participants were fifteen Chinese students (two males and thirteen females) who majored in Thai at this university.

The findings of the pilot study show that there were 548 spelling errors altogether and that the biggest difficulty in spelling Thai was spelling vowels. Three possible causes were found; namely, complexity of the Thai writing system, interference from Chinese phonological system, and influence from Thai native speakers.

The pilot study proved that the dictation methodology that would be used in the research was feasible. Moreover, findings of the pilot study also provided some frequently misspelled words by Chinese students, and some of them were further used as target words for the dictation method in the present study.

3.1.2 Instruments

A questionnaire consisting of three parts was used as the instrument of the research.

3.1.2.1 The first part of the questionnaire: basic questions

It was designed to collect the demographic information and language background of the participants. As shown in Table 3-1, fifteen questions were asked in order to check whether or not they met the following selection criteria:

- 1) Participants' native language is dominant in their daily communication;
- 2) Participants have lived in the country where their native language is spoken for the most part of their lives;
- 3) Participants do not have a learning disability or listening disability;
- 4) For Chinese and Lao students, Thai is a foreign language and their Thai proficiency is adequate to communicate with others both in oral and writing;
- 5) For Chinese students, their Thai language is acquired from classrooms;
- 6) From Lao students, their Thai language is acquired from a natural environment, not in classrooms.

Table 3-1 The first part of the questionnaire

<p><u>1. General Background</u></p> <p>Q1: Nationality:</p> <p>Q2: City:</p> <p>Q3: Age:</p> <p>Q4: Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p><u>2. Language Background</u></p> <p>Q5: Which country are you born? <input type="checkbox"/> Thailand <input type="checkbox"/> Laos <input type="checkbox"/> China <input type="checkbox"/> Others (specify:_____)</p> <p>Q6: Which language is your native language? <input type="checkbox"/> Thai <input type="checkbox"/> Lao <input type="checkbox"/> Chinese <input type="checkbox"/> Others (specify:_____)</p> <p>Q7: Which language do you speak most in your daily life? <input type="checkbox"/> Thai <input type="checkbox"/> Lao <input type="checkbox"/> Chinese <input type="checkbox"/> Others (specify:_____)</p> <p>Q8: Could you please estimate your Thai proficiency?</p> <p><input type="checkbox"/> Very poor, I know very little about Thai.</p> <p><input type="checkbox"/> Poor, I can understand some simple Thai words but it is not enough to support me to communicate with others in Thai.</p> <p><input type="checkbox"/> Adequate, I have no big problem in using Thai in both oral and written communication.</p> <p><input type="checkbox"/> Good, I can use Thai to communicate with others pretty well.</p>
--

- Excellent, my Thai is at a native level, including speaking, listening, writing, and reading.

Q9: Could you please estimate your Thai writing proficiency?

- Very poor, I cannot write any Thai.
- Poor, I can only write some simple Thai words.
- Adequate, I can write various Thai words and form Thai sentences to express myself.
- Good, I can write Thai to express my ideas logically.
- Excellent, I can write Thai at a native level.

Q10: How do you learn Thai? (You can choose more than one option)

- I am a native speaker and I do not need to learn it additionally.
- I learn Thai as a foreign language in school/college/language courses.
- I learn Thai by listening to Thai radios, watching Thai movies, or listening to Thai songs.
- I learn Thai by interacting with Thai native speakers.

Q11: How regularly do you currently speak Thai?

- Do not speak Thai at all.
- Occasionally, e.g., when I go abroad or have foreign guests.
- Quite regularly.
- Every day.

Q12: How regularly do you hear spoken Thai?

- Do not hear spoken Thai at all.
- Occasionally, e.g., when I go abroad or have foreign guests.
- Quite regularly.
- Every day.

Q13: How regularly do you currently read in Thai?

- Do not read in Thai at all.
- Occasionally, e.g., when I go abroad or have foreign guests.
- Quite regularly.
- Every day.

Q14: How regularly do you currently write in Thai?

- Do not write in Thai at all.
- Occasionally.
- Quite regularly.
- Every day.

Q15: Have you ever had a listening disability? Learning disability?

Yes No

If yes, please explain:

Question 1 to Question 7 aimed to gather the basic information about participants' nationality, age, gender, their native language and the information about the predominant language used in their daily life. Question 8 and Question 9 requested the students to self-evaluate their Thai proficiency and Thai writing proficiency. Five levels were set; namely, "Very poor", "Poor", "Good", "Adequate", and "Excellent". Question 10 was set to enquire the way that the students master the Thai language. Question 11 to 14 were developed on the basis of the questionnaire used by Dich (2011)Dich (2011)Dich (2011), which intended to obtain the information regarding the use of the Thai language among the students. Four main skills of using the Thai language were asked; namely, speaking, listening, reading, and writing. Four degrees were set: "Not at all", "Occasionally", "Quite regularly", and "Every day". In order to quantify the use of the Thai language and compare it among different groups, Likert Scale was applied as shown in Table 3-2.

Table 3-2 The degree of the Thai language use in all the groups

Not at all	Occasionally	Quite regularly	Every day
1	2	3	4

As shown in Table 3-2, the higher scale the students got, the more frequently the corresponding language skill was used. Question 15 asked whether the respondents had ever had a listening disability or learning disability, which might cause a potential effect on the output of the study.

3.1.2.2 The second part of the questionnaire: composition writing (See Appendix 1)

The second part of the questionnaire was a composition writing task, which is also the most frequently used method when conducting studies on spelling errors (Alhaisoni, Al-Zuoud, and Gaudel 2015, Golshan and Reigani 2015, Mahmoud 2013). It is proved to be the most neutral way to collect data, which minimizes the influence and bias of research designers, since participants can show their real language level by expressing themselves without much limitation. In the present study, the participants were requested to write a composition about 100-150 words in Thai within twenty minutes. The topic of composition was provided, which was "My country". The participants

were reminded not to use any fancy scripts in their writing and try to make the composition clear and readable. All the participants accomplished the compositions independently and without any help of electronic devices throughout the writing.

3.1.2.3 The third part of the questionnaire: dictation (See Appendix 2)

Apart from composition writing, dictation is another method that is widely used to collect spelling errors (Arani 1985, Gunion 2012, Solati and Lah. n.d.). It is always considered as an alternative approach for free writing. It can help research designers to control the difficulty of the test and prevent participants from using avoidance strategy in free writing, since they might only use some simple and basic words that they are familiar with due to the fear of making spelling errors. Therefore, dictation method is adopted in this study. Totally sixty Thai words were chosen to be the target words in a word dictation test. The selection of the words was based on the findings of the pilot study and my own observations in learning and teaching Thai. Each word has a corresponding sentence to make its meaning clear. All the sentences were selected either from Thailand National Corpus (TNC) or Thai-English Electronic Dictionary Lexitron.

In order to present the target words here, I use Thai alphabet and phonetic symbols so that everyone can read them. The system of transcription used in this thesis is shown in Table 3-3 below, and the target words used in the dictation test are presented after that.

Table 3-3 Thai letters and transcription used in the thesis

Thai letters	Transcription	Thai letters	Transcription
ก	/k/	ะ	/a/
จ	/tɕ/	า	/a:/
ด ฎ	/d/	อ	/i/
ต ฏ	/t/	โ	/i:/
บ	/b/	เ	/u/
ป	/p/	เ	/u:/
อ	/ʔ/	เ	/u/

Thai letters	Transcription	Thai letters	Transcription
ข	/k ^h /	อู	/u:/
ฃ	/t ^h /	เ-ะ	/e/
ฅ	/t ^h /	เ-	/e:/
ฆ	/t ^h /	แ-ะ	/ɛ/
ผ	/p ^h /	แ-	/ɛ:/
ฝ	/f/	โ-ะ	/o/
ส ศ ษ	/s/	โ-	/o:/
ห	/h/	เ-าะ	/ɔ/
ค ฌ	/kh/	-อ	/ɔ:/
ง	/ŋ/	เ-อะ	/ɤ/
ช ฌ	/t ^h /	เ-อ	/ɤ:/
ซ	/s/	อํ	/am/
ญ ย	/j/	ใ- ไ-	/aj/
จ ฌ ฎ ฐ	/t ^h /	เ-า	/au/
น ฌ	/n/	อัว อัวะ	/ua/
พ ภ	/p ^h /	เีย เียะ	/ia/
ฟ	/f/	เือ เือะ	/ua/
ม	/m/	-- ⁴	/a/
ร	/r/	อํ	/à/
ล ฬ	/l/	อํ	/â/
ว	/w/	อํ	/á/
ฮ	/h/	อํ	/ã/

⁴ The mid tone in Thai does not have a marker to indicate.

The sixty Thai words used in dictation are divided into thirteen groups according to the key features related to problems of sounds and spelling, such as homophony, discrepancy between letters and pronunciation, unpronounced letter and certain items that tend to cause problems to Chinese and Lao people learn Thai. The sixty words are as follows.

1. Initial consonants:

1) Consonants with similar or identical pronunciation:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
กงสุล	/kɔŋsǔn/	consul	ปรับปรุ้ง	/pràpprunj/	adjust
ศัพท์	/sàp/	vocabulary	กำไร	/kamraj/	profit
เศร้าโศก	/sâusò:k/	depressed	ครอบครัว	/k ^h rò:pk ^h rua/	family
โฆษณา	/k ^h ò:tsàna:/	advertisement	เลียนแบบ	/lianbè:p/	copy
ปฏิเสธ	/pàtisè:t/	refuse	อนุญาต	/ʔànújà:t/	allow
กรุณา	/kàrúna:/	please	กรกฎาคม	/kàràkàda:k ^h om/	July

2) Consonant clusters:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ทราย	/saj/	sand	แทรกแซง	/sɛ:kse:ŋ/	intervene
ขนม	/k ^h àñm/	sweets	ผลิตภัณฑ์	/p ^h àlittàp ^h an/	product
เครื่องมือ	/k ^h rúammu:/	tool	ทรัพย์สิน	/sápsin/	asset
สนาม	/sàñm/	yard	ครอบครัว	/k ^h rò:pk ^h rua/	family
ปฏิเสธ	/pàtisè:t/	refuse	อนุญาต	/ʔànújà:t/	allow
กรุณา	/kàrúna:/	please	สร้างสรรค์	/sâ:ŋsǎn/	create
เครียด	/k ^h riat/	worried	ชัยชนะ	/tɕ ^h ajtɕ ^h áná/	victory
อนุมัติ	/ʔànúmát/	approve	คณบดี ⁵	/k ^h ánábɔ:di:/	dean

สะดวกสบาย /sàdùaksàba:j/ convenient

3) Special consonants for Chinese and Lao students:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ทราย	/saj/	sand	กรกฎาคม	/kàràkàda:k ^h om/	July

⁵ Based on the explanation in the Royal Institution Dictionary (2011), the word should be pronounced as <คณบดี> /k^hánábɔ:di/, which will be applied as the transcription for the word <คณบดี> throughout the thesis; however, in the actual situation, the pronunciation of the syllable <บ> was weakened and shortened as /bɔ/.

สดชื่น	/söttɕʰú:n/	fresh	ปรับปรุง	/pràpprun/	adjust
เผชิญ	/pʰàtɕʰ:n/	confront	กำไร	/kamraj/	profit
แทรกแซง	/sɛ:kse:ŋ/	intervene	ครอบครัว	/kʰrɔ:pʰrua/	family
กรุณา	/kárúna:/	please	เครียด	/kʰriat/	worried
ชัยชนะ	/tɕʰajtɕʰáná/	victory			

2. Vowels:

1) Vowels with the same pronunciation:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ลำไย	/lamjaj/	longan	ไม้บรรทัด	/májbantʰát/	ruler
ร้องไห้	/ró:ŋhâj/	cry	หลงใหล	/lɔŋlâj/	to be fascinated
ชัยชนะ	/tɕʰajtɕʰáná/	victory	บรรเทา	/bantʰau/	relieve
ลำไส้	/lamsâj/	intestine	วัฒนธรรม	/wátʰánátʰam/	culture
สร้างสรรค์	/sâ:ŋsǎn/	create	สัมพันธ์	/sǎmpʰan/	relations

2) Special vowels for Chinese and Lao students:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
กงสุล	/konjsǔn/	consul	รำคาญ	/ramkʰa:n/	to be annoyed
กลิ่น	/klin/	smell	เครื่องมือ	/kʰrúŋmu:/	tool
เคย	/kʰɕ:j/	once	แน่นแฟ้น	/nɛ:nfɛ:n/	firm
งูเห่า	/ŋu:hàu/	cobra	บรรเทา	/bantʰaw/	relieve
เบียร์	/bia/	beer	ทรมาน	/tʰw:ráma:n/	torture
มอเตอร์ไซด์ ⁶	/mɔ:tɕ:saj/	motorcycle			

3) Complicated vowels:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
เผชิญ	/pʰàtɕʰ:n/	confront	แสดง	/sàde:ŋ/	show

3. Final consonants:

1) Final consonant /t/:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ประเทศ	/pràtʰè:t/	country	รัฐบาล	/rátʰaba:n/	government

⁶ In the actual situation, the pronunciation of the syllable <เตอร์> was also weakened and shortened but the transcription will be strictly accordance with the writing of this word.

โทรทัศน์	/t ^h o:rát ^h át/	television	กฎหมาย	/kòtmǎ:j/	law
ผลิตภัณฑ์	/p ^h àlittàp ^h an/	product	สังเกต	/sǎŋkèt/	observe
ปฏิเสธ	/pàtisè:t/	refuse	โอกาส	/ʔo:kà:t/	chance
ฟุตบอล	/fútbo:n/	football	อนุญาต	/ʔànújâ:t/	allow
ปรากฏ	/pra:kòt/	appear	ประโยชน์	/pràyo:t/	benefit
โฆษณา	/k ^h ò:tsàna:/	advertisement	วัฒนธรรม	/wátt ^h ánát ^h am/	culture

2) Final consonants /k/:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
สามัคคี	/sǎ:mákk ^h i:/	harmony	สุขภาพ	/sùkk ^h àp ^h â:p/	health

3) Final consonant /p/:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ศัพท์	/sàp/	vocabulary	สุขภาพ	/sùkk ^h àp ^h â:p/	health
ทรัพย์สิน	/sápsin/	asset			

4) Final consonants /n/:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
กงสุล	/kɔŋsún/	consul	รัฐบาล	/rátt ^h àba:n/	government
เผชิญ	/p ^h àtɕ ^h ɔ:n/	confront	รำคาญ	/ramk ^h â:n/	to be annoyed
ประสบการณ์	/pràsòpka:n/	experience	กลิ่น	/klin/	smell
ผลิตภัณฑ์	/p ^h àlittàp ^h an/	product	บริการ	/bɔ:ríkâ:n/	service
ฟุตบอล	/fútbo:n/	football	ทรมาน	/t ^h ɔ:rámâ:n/	torture

4. Tone markers:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
แลกเปลี่ยน	/lɛ:kplian/	exchange	ดังนั้น	/dǎŋnán/	therefore
เครื่องมือ	/k ^h íruánǵmu:/	tool	งูเห่า	/ŋu:hàu/	cobra
แน่นแฟ้น	/nɛ:nfɛ:n/	firmly	เบียร์	/bia/	beer
เครียด	/k ^h ríat/	worried	เคย	/k ^h ɔ:j/	once
เศร้าโศก	/sâusò:k/	depressed	กลิ่น	/krin/	smell
สร้างสรรค์	/sǎ:ŋsǎn/	create	ลำไส้	/lamsàj/	intestine
ทรัพย์สิน	/sápsin/	asset	เลียนแบบ	/lianbɛ:p/	copy
สดชื่น	/sòttɕ ^h ú:n/	fresh			

5. Unpronounced letters:

1) Unmarked unpronounced letters:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
สัมพันธ์	/sǎmp ^h an/	relations	อนุมัติ	/ʔànúmát/	approve
อนุญาต	/ʔànújâ:t/	allow	ผูกพัน	/p ^h ù:kp ^h an/	commit

2) Marked unpronounced letters:

Thai word	Transcription	Meaning	Thai word	Transcription	Meaning
ศัพท์	/sàp/	vocabulary	โทรทัศน์	/t ^h o:rát ^h át/	television
ประสบการณ์	/pràsòpka:n/	experience	เบียร์	/bia/	beer
ทรัพย์สิน	/sápsin/	asset	ประโยชน์	/pràyò:t/	benefit
มอเตอร์ไซด์	/mò:tɕ:saj/	motorcycle	สร้างสรรค์	/sâ:ŋsǎn/	create
ฟุตบอล	/fútbo:n/	football	ผูกพัน	/p ^h ù:kp ^h an/	commit

The sentences containing all the above key words in the dictation test can be seen in Appendix 2.

3.2 Participants

A total of ninety students participated in the present study. They comprised three groups according to their native language.

3.2.1 Group 1: Chinese students

Group 1 was composed of thirty Chinese students, who were in their third academic year majoring in the Thai language at Xi'an International Studies University, Xi'an City, Shaanxi Province, China. Among the thirty Chinese students, nine of them (30%) were males and another 21 (70%) were females.

Regarding the age of Chinese students, it distributed from 19 to 24 years old, and a predominant percentage of students was at the age of 20-21 years old, as shown in Figure 3-1.

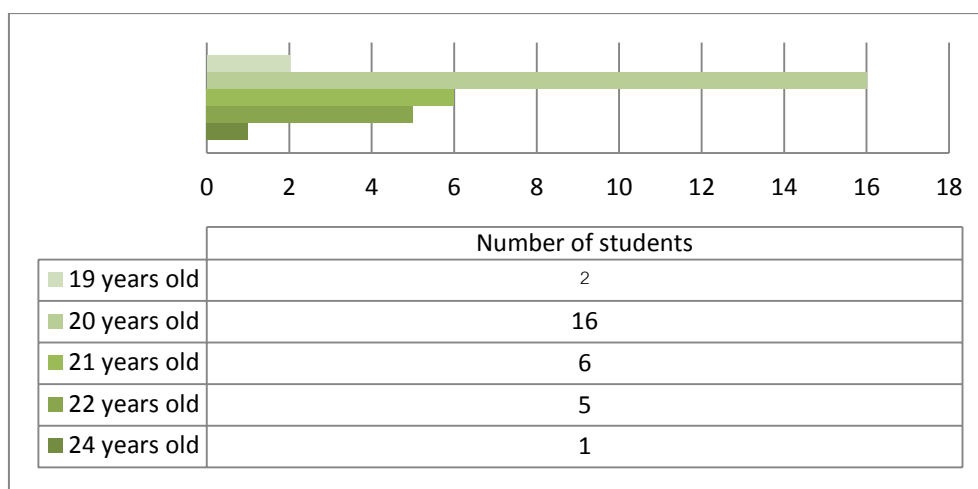


Figure 3-1 Age of Chinese students

One question concerns the participants' region of their hometown. It was used for identifying their dialects because their spelling might be relevant to their dialects according to the findings of the pilot study. Thus, the dialect types of the participants are listed instead of the cities and provinces.

Table 3-4 Dialects of Chinese students

Dialect	Numbers of students	Proportion
Zhongyuan Mandarin	9	30%
Jin Mandarin	7	23%
Southwest Mandarin	4	13%
Ji Lu Mandarin	3	10%
Beijing Mandarin	1	3%
Wu Dialect	2	7%
Min Dialect	2	7%
Yue Dialect	2	7%
Total	30	100%

The answers in the first part of the questionnaire show that all the thirty Chinese students were born in China. Chinese and some dialects are the languages that they use most in their daily life. None of them have a listening or learning disability.

A predominant proportion of the students estimated their Thai proficiency (83%) and Thai writing proficiency (90%) as “adequate”. In terms of the way of acquiring Thai language, all of them chose “I learn Thai as a foreign language in school/college/language courses” and six of them also chose “I learn Thai by listening

to Thai radios, watching Thai movies, or listening to Thai songs” additionally. Only one of them chose “I learn Thai by interacting with Thai native speakers.”

As mentioned earlier, Likert Scale was applied in order to quantify the degree of Thai language use among the students. Four degrees corresponded with four scales; i.e., “Not at all”: 1, “Occasionally”: 2, “Quite regularly”: 3, and “Every day”: 4. For example, in terms of speaking, 14 students chose “Occasionally”, 10 chose “Quite regularly”, and 6 chose “Every day”. The total weight is $(14*2) + (10*3) + (6*4) = 82$ and the mean is $82/30 \approx 2.7$, which means that the degree of speaking Thai among Chinese students is 2.7, ranging between “Occasionally” and “Quite regularly”. As summarized in Table 3-5, the degree of speaking and writing among Chinese students is between “Occasionally” and “Quite regularly”; listening is “Quite regularly”; reading is between “Quite regularly” and “Every day”.

Table 3-5 Chinese students’ degree of using Thai language

Item	Mean (N=30)
Speaking	2.7 Almost quite regularly
Listening	3 Quite regularly
Reading	3.1 Quite regularly
Writing	2.8 Almost quite regularly

In sum, the degrees of speaking, listening, reading, and writing are relatively average and high among Chinese students, which means that all the four skills play a relatively average and important role in Chinese students’ daily life.

3.2.2 Group 2: Lao students

The second group was composed of thirty Lao students (16 females and 14 males) who majored in the International Relationship in the Faculty of Laws and Political Science, National University of Laos, which is located in Vientiane, Laos. All the thirty students were born in Vientiane, Lao. Lao is the only predominant language used in their daily life. None of them have a listening or learning disability.

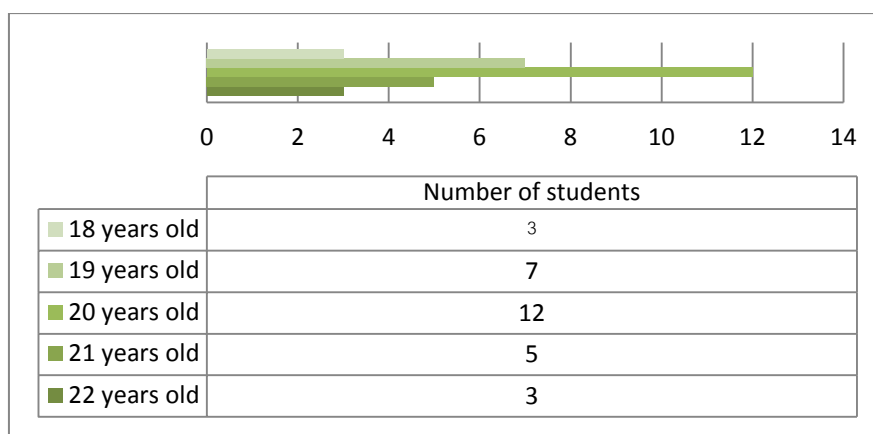


Figure 3-2 Age of Lao students

All the thirty Lao students estimated their Thai proficiency and Thai writing proficiency to be above adequate. The acquisition of Thai among the thirty Lao students is acquired by listening to Thai radios, watching Thai movies, or listening to Thai songs. None of them chose “I learn Thai as a foreign language in school/college/language courses”, which means that none of them have ever learned Thai in classrooms.

Table 3-6 demonstrate the choices of Lao students and the degree in using Thai language among the thirty Lao students. The degree of listening and reading is between “Quite regularly” and “Every day”, which is relatively higher than other skills. The degree of speaking is between “Occasionally” and “Quite regularly”. On the other hand, writing has a much lower degree, which is “Occasionally”. It reflects that Lao students have fewer opportunities to write Thai.

Table 3-6 Lao students’ degree of using Thai

Item	Mean (N=30)
Speaking	2.7 Almost quite regularly
Listening	3.1 Quite regularly
Reading	3.1 Quite regularly
Writing	2.0 Occasionally

3.2.3 Group 3: Thai students

The last group of participants was made up of thirty Thai students (6 males and 24 females) who are studying at Faculty of Arts, Chulalongkorn University, Bangkok, Thailand. The purpose of choosing a group of Thai native speakers was to identify the spelling errors made by native speakers and use the spelling errors committed by Thai

native speakers to compare with the ones made by Chinese and Lao students. All the thirty Thai students use Thai as the predominant language in their daily life. None of them have ever had a listening or learning disability. Twenty-eight of them were from Bangkok, and one was from Chiang Mai, one was from Chiang Rai. Figure 3-3 illustrates their age distribution.

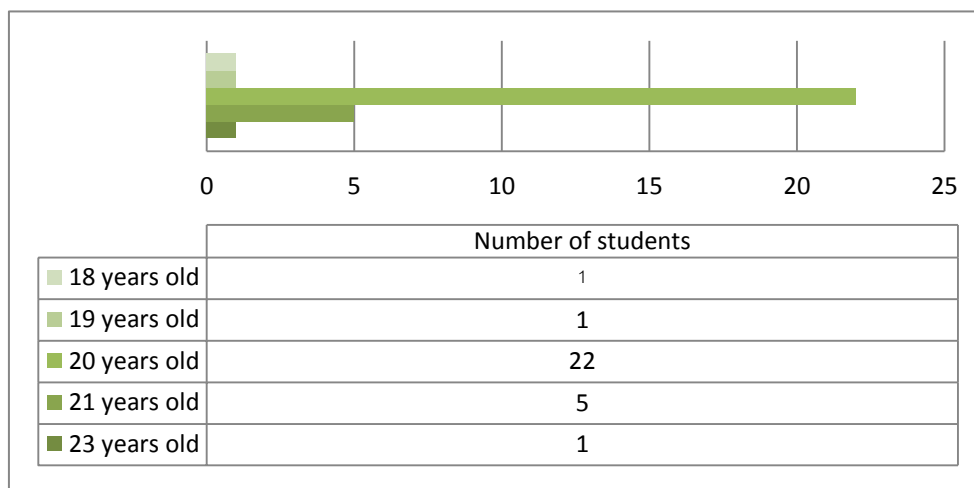


Figure 3-3 Age of Thai students

As shown in Table 3-7, the degree of all the four skills among Thai students is quite close to “Every day”, which is much higher than the degree of Chinese and Lao students. The degree of writing is slightly lower than other skills.

Table 3-7 Thai students’ degree of using Thai

Item	Mean (N=30)
Speaking Thai	3.9 Almost every day
Listening spoken Thai	3.9 Almost every day
Reading in Thai	3.8 Almost every day
Writing Thai	3.3 Almost every day

3.3 Data collection

The data from the three groups of informants was collected in China, Laos, and Thailand respectively. In order to minimize the influence from the environment and reduce the nervousness of the students, thirty informants of each group were gathered in a quiet classroom and I was the only instructor of the test.

After the questionnaires were handed out, time recording began. The participants were given twenty-five minutes to finish the first and second part of the questionnaire. After twenty-five minutes, the dictation test started and all the words were read by me at a moderate speed. Each of the Thai words was read once in isolation, then it was put into a sentence and the sentence was read once. Participants were required to write down the target words on an answer sheet on the questionnaire. The dictation took about thirty minutes to accomplish. I hand-collected the completed questionnaires in order to ensure that all the data collected from the informants were non-revised first drafts.

3.4 Data analysis

Data analysis consisted of two steps: spelling error identification and spelling error classification:

3.4.1 Spelling error identification

The differences between errors and mistakes are discussed by many scholars (Brown 2007, Calvez 2000, Edge 1989). Mistakes are regarded as the deviations which have no significance to study. They are made due to the carelessness of writers and they are also self-correctible. On the other hand, errors are allocated with much research significance, which are considered as the deviations made by writers because of incompetence. Moreover, errors are not self-correctible for writers and they need to be pointed out and corrected by others.

From the brief discussion related to mistakes and errors, the distinction between errors and mistakes can be summarized easily. However, it is difficult to distinguish one deviation to be an error or a mistake in a real situation. Therefore, in the present study, all the words that were deviated from the spelling in the Royal Institute Dictionary (2011) were identified as spelling errors. Since the present study only focused on spelling errors, grammatical errors, lexical errors, or other types of errors were not taken into consideration.

3.4.2 Spelling error classification

In the stage of classifying the errors, the classification way proposed by Cook (1999) was adjusted and the phonological features of Thai were taken into consideration as well. Therefore, the spelling errors were first classified into five categories with respect to the phonological features of Thai words; namely, errors in writing vowel letters, initial consonant letters, final consonant letters, unpronounced letters, and tone markers. Then, based on the definitions given by Ellis (1994, 56), each type was further classified into substitution, omission, insertion, or misplacement according to the alphabetic order of misspelled words:

- 1) Substitution: selecting incorrect elements;
- 2) Omission: leaving out required elements;
- 3) Insertion: adding unnecessary elements;
- 4) Misplacement: putting the items in wrong place;

Moreover, I also recorded the frequency of each error type and calculated their percentages of the total. Each word written by the participants in the compositions and dictation test was scrutinized for errors. When there was more than one error in the same word, all errors were counted.

In summary, the methodology utilized in the present study is summarized in this chapter. The design of the study, the informants, and the process of collecting and analyzing data are introduced. In the next chapter, common patterns of spelling errors made by the students will be presented.

Chapter 4 Common Patterns of Spelling Errors in Thai

This chapter presents the result of my analysis of the common patterns of spelling errors based on the data collected from Chinese, Lao, and Thai students. The frequency of occurrences and some typical examples of each pattern are explained in order to provide a general picture of the spelling errors made by both foreign and native speakers of Thai.

4.1 Classification of the spelling errors in Thai

As mentioned in 3.4.2, two dimensions of errors were taken into consideration when classifying all the spelling errors. The first dimension was based on the phonological features of the Thai language; i.e., vowels, initial consonants, final consonants, unpronounced letters, and tone markers. Another dimension is what happens to the misspelled letters, which is categorized into substitution, omission, insertion, and misplacement. The two dimensions of the classification will be explained in the following sections.

4.1.1 Patterns of spelling errors based on linguistic features

This section presents patterns of spelling errors based on the phonological features of Thai words. As shown below, all the spelling errors were classified into five categories: errors in vowels, initial consonants, final consonants, unpronounced letters, and tone markers.

4.1.1.1 Thai vowels and errors in writing vowels

As shown in Table 4-1, there are 32 vowels in Standard Thai (Dittabanjong 2010), which are divided into two types: simple vowels, which are composed of one letter, such as <๕> /a/, <เ> /e:/, and <ุ> /u:/, and complex ones, which are composed of more than one letter, such as <เีย> /ia/, <ัว> /ua/, and <เื้อ> /wa/ (Burnham et al., 2013).

Table 4-1 Vowel letters in Thai

<ะ> /a/	<า> /a:/	<ิ> /i/	<ี> /i:/
<ื> /u/	<ู> /u:/	<ุ> /u/	<ู> /u:/
<ะ> /e/	<เอ> /e:/	<ะ> /ɛ/	<แ> /ɛ:/
<โ> /o/	<โอ> /o:/	<ะ> /ɔ/	<อ> /ɔ:/
<ะ> /ɤ/	<เอ> /ɤ:/	<ैया> /ia/	<ैया> /ia/
<ैया> /ua/	<ैया> /ua/	<ัว> /ua/	<ัว> /ua/
<ำ> /am/	<เ> /au/	<ไ> /aj/	<ไ> /aj/
<ฤ> /rɯ:/	<ฤ> /rɯ:/	<ฤ> /lɯ:/	<ฤ> /lɯ:/

Vowels in Thai are not always written in the consonant-vowel linear order. They can occur before, after, above, or below initial consonants. Figure 4-1 shows the diversity of the position of vowels in Thai syllables: the vowel <ไ> /aj/ appear before the initial consonant <ป> /p/ of <ไป> /paj/ ‘go’; the vowel <า> /a:/ is after the initial consonants of <อยาก> /jà:k/ ‘want’; the vowel <ะ> /a/⁷ is above the initial consonants <น> /n/ of <หนัง> /nǎŋ/ ‘movie’; and the vowel <ู> /u:/ is below the initial consonant <ด> /d/ of <ดู> /du:/ ‘see’.

ผมอยากไปดูหนัง
p^hǒm jà:k paj du: nǎŋ
‘I want to go to the movies’

Figure 4-1 The position of Thai vowels

When vowel letters are put before initial consonant letters, the order of spelling will be vowel + initial consonant + final consonant (if any); however, in the pronunciation, the order is still initial consonant + vowel + final consonant (if any). For example, in the word <แบน> /bɛ:n/ ‘flat’, the order of pronunciation follows /b/ + /ɛ:/ + /n/, even though the spelling form starts with the vowel <แ>, then the initial consonant <บ> and final consonant <น>. In the Thai writing system, the vowel <แ> has to be placed in front of the initial consonant <บ>. Therefore, the mismatch between spelling and pronunciation occurs. Winskel (2009) defines the vowels which can precede the initial

⁷ When there is a final consonant in the syllable, <ะ> /a/ will be shifted into <ั> /a/, which is called <ไม่หันอากาศ> /mǎjhǎn?akà:t/, such as <น>, <ะ>, and <น> are spelled together into <กัน> /kan/ ‘together’.

consonant in writing as misaligned vowels. By checking eye movement of Thai adults when reading the words with or without misaligned vowels, she proves that Thai native speakers have to make more efforts to read the words including misaligned vowels.

In addition, in terms of the correspondence between phonemes and graphemes, Thai vowels have a one-to-one grapheme-to-phoneme correspondence, which means that one vowel letter has only one way of pronunciation. On the other hand, many Thai vowel sounds can be represented by more than one letter. For instance, /aj/ sound is represented by <ไ>, <ใ>, <ัย>, and <ไย>; /am/ sound can be represented by <-รรม>, <ำ> and <ัม>; <an> sound is represented by <-รร>, <ัน> and <-รรณ>.

Making errors in writing vowels refers to failing to choose the correct vowel, such as *<หลงไหล> for <หลงไหล> /lɔŋlāj/ ‘to be fascinated’, omitting a necessary vowel letter, such as *<สะดวกบาย> for <สะดวกบาย> /sàduaksàbaij/ ‘convenient’, adding a redundant vowel, such as *<คณะบดี> for <คณะบดี> /kʰánábo:di/ ‘dean’, or putting the vowel in the incorrect position, such as *<เค็รียด> for <เค็รียด> /kʰriat/ ‘worried’.

4.1.1.2 Thai initial consonants and errors in writing initial consonants

As can be seen in Table 4-2, 44 consonant letters are used to represent 21 initial consonant sounds in Thai (Thonglor 2012), and two letters have been obsoleted: <ข> /kʰ/ and <ค> /kʰ/. All the 42 initial consonants are divided into three classes, namely, mid, high, and low. Each class of initial consonants has different inherent tones, which will play an important role in determining the tone value of syllables.

Table 4-2 Initial consonants in Thai

Mid-class consonants	ก /k/, จ /tɕ/, ฉ /d/, ฎ /t/, ด /d/, ต /t/, บ /b/, ป /p/, อ /ʔ/
High-class consonants	ข /kʰ/, ฉ /tɕʰ/, ฐ /tʰ/, ถ /tʰ/, ผ /pʰ/, ฝ /f/, ห /h/, ศ /s/, ษ /s/, ส /s/
Low-class consonants	ค /kʰ/, ท /kʰ/, ง /ŋ/, ช /tɕʰ/, ซ /s/, ฌ /tɕʰ/, ญ /j/, ฑ /tʰ/, ฒ /tʰ/, ณ /n/, ท /tʰ/, ธ /tʰ/, น /n/, พ /pʰ/, ฟ /f/, ภ /pʰ/, ม /m/, ย /j/, ร /r/, ล /l/, ว /w/, ฬ /l/, ฮ /h/

The inconsistency between phonemes and graphemes extensively exists in Thai initial consonant system. Many phonemes can be represented by more than one grapheme, for example, high-class consonant /s/ sound can be represented by three different

letters, namely, <ส>, <ศ>, and <ซ>; low-class consonant /t^h/ are represented by <ท>, <ธ>, <ฒ>, and <ฑ>.

Additionally, initial consonant of many syllables is not a single consonant, which might be composed of two sequential consonant letters, which are called clusters. According to Slayden (2008), there are totally four types of clusters: 1) true consonant clusters, in which the first consonant letter must be <ก> /k/, <ข> /k^h/, <ค> /k^h/, <ต> /t/, <ป> /p/, <ผ> /p^h/, or <พ> /p^h/, and the second consonant letter must be <ร> /r/, <ล> /l/, or <ว> /w/, such as <ปลา> /pla:/ ‘fish’, <เครื่องมือ> /k^hrúan/ ‘tool’, and <พระ> /prá/ ‘Buddha image’; 2) false consonant clusters (pronounced as single consonant), in which the first consonant is one of <จ> /tɕ/, <ช> /s/, <ท> /t^h/, <ส> /s/, or <ศ> /s/, and the second consonant must be <ร> /r/, such as <ทราบ> /sâ:p/ ‘know’, <จริง> /tɕin/ ‘really’, and <ไซ้> /sâj/ ‘then’. Among the words which include a false consonant cluster, <ร> is not pronounced in <จร> /tɕ/, <ชร> /s/, <สร> /s/, <ศร> /s/, and <ทร> /s/ has the same pronunciation as the low-class initial consonant <ช>; 3) leading consonant clusters, which are divided into two sub-categories: tone-shifting leading consonant clusters and epenthetic leading consonant clusters. Tone-shifting leading consonant clusters mean that the first consonant letter of the cluster is silent <ท> /h/ or <อ> /ʔ⁸ and the second one must be one of the low-class sonorant consonants: <ง> /ŋ/, <น> /n/, <ม> /m/, <ย> /j/, <ร> /r/, <ล> /l/, <ว> /w/, <ญ> /j/, <ณ> /n/, or <ฬ> /l/, such as <หนา> /nâ:/ ‘bushy’ and <อยู่> /jù:/ ‘live’. On the other hand, epenthetic leading consonant clusters mean that there is an inserted short vowel /a/ between the two consonant letters of the clusters, such as <ถนน> /t^hànǎn/ ‘road’, <สนาม> /sànǎ:m/ ‘yard’, and <เฉลี่ย> /tɕ^hàliə/ ‘average’; 4) other clusters, referring to the consonant sequences using <บร> and <รร>, such as <บริหาร> /bɔ:ríhǎ:n/ ‘administrate’ and <บรรเทา> /bant^hau/ ‘relieve’. Since the function of <รร> is more inclined to a vowel, it could be pronounced as /a/ or /an/ depending on whether there is a final consonant or not, so I classified the spelling errors in <รร> into the errors in vowels rather than errors in initial consonant clusters in this thesis. For

⁸ When the first consonant letter of the tone-shifting consonant cluster is <อ> /ʔ/, there are exactly four words, namely, <อย่า> /jà:/ ‘do not’, <อยู่> /jù:/ ‘live’, <อย่าง> /jà:ŋ/ ‘type’, and <อยาก> /jà:k/ ‘want’.

example, the error *<บันดา> for <บรรดา> /banda:/ ‘all’ was considered as an error in vowel substitution since <รร> is pronounced as /an/ when there is no final consonant.

Making errors in writing initial consonants refers to failing to choose the correct initial consonant for the word, such as *<กงศุล> for <กงสุล> /kongsun/ ‘consul’, omitting part of the initial consonant cluster, such as *<กวาง> for <กลาง> /kla:ŋ/ ‘middle’, or adding a redundant initial consonant in the word, such as *<องค์กราน> for <องค์การ> /ʔɔŋka:n/ ‘organization’.

4.1.1.3 Thai final consonants and errors in writing final consonants

Among the 42 initial consonant letters mentioned earlier, 33 of them can be used as final consonants; however, there are only six final consonant phonemes: /k/, /t/, /p/, /ŋ/, /n/, and /m/ in the Thai final consonant system (two diphthong endings /u/ and /j/ are not included here). As listed in Table 4-3, most of the final consonant sounds are corresponding with more than one final consonant letter, for example, the final consonant phoneme /t/ is presented by sixteen different final consonant letters. All the words used below are from the examples used by Danvivathana in her dissertation entitled *the Thai Writing System*.

Table 4-3 The correspondence between final consonant phonemes and graphemes (Danvivathana, 1981)

Phonetic values in final position	Consonant letters	Examples
/p/	บ	<ราบ> /râ:p/ ‘smooth’
	พ	<ภาพ> /p ^h â:p/ ‘picture’
	ภ	<ลาภ> /lâ:p/ ‘fortune’
	ป	<บาป> /bâ:p/ ‘to be greedy’
	ฟ	<กอล์ฟ> /kô:p/ ‘golf’
/t/	ด	<กด> /kòt/ ‘press’
	ฎ	<กฎ> /kòt/ ‘rule’
	ต	<จิต> /tɕit/ ‘mind’
	ฏ	<ปรากฏ> /pra:kòt/ ‘appear’
	ท	<บาท> /bâ:t/ ‘baht’
	ธ	<อาวุธ> /ʔa:wút/ ‘weapon’
	ฑ	<ครุฑ> /k ^h rút/ ‘Garuda’
	ฒ	<วุฒ> /wút/ ‘prosper’

Phonetic values in final position	Consonant letters	Examples
	ฐ	<รัฐ> /rát/ 'state'
	ถ	<รถ> /rót/ 'car'
	จ	<อาจ> /ʔà:t/ 'might'
	ช	<พืช> /pʰít/ 'vegetation'
	ส	<รส> /rót/ 'taste'
	ศ	<ทิศ> /tʰít/ 'direction'
	ช	<โทษ> /tʰót/ 'punishment'
/k/	ช	<ก๊าซ> /ká:t/ 'gas'
	ฆ	<เมฆ> /mê:k/ 'cloud'
	ก	<สุก> /sùk/ 'to be cooked'
	ข ค	<สุข> /sùk/ 'happiness' <โรค> /rò:k/ 'disease'
/m/	ม	<สาม> /sǎ:m/ 'three'
/n/	น ณ	<เรือน> /ruan/ 'house' <คุณ> /kʰun/ 'you'
	ร	<พร> /pʰw:n/ 'blessing'
	ล	<กาล> /ka:n/ 'time'
	ฬ	<กาฬ> /ka:n/ 'to be black'
	ญ	<ครวญ> /kʰruan/ 'to groan'
/ŋ/	ง	<หาง> /hǎ:ŋ/ 'tail'

Making errors in writing final consonants means failing to choose the correct final consonant, such as *<ทรมาร> for <ทรมาน> /tʰw:ráma:n/ 'torture', omitting a necessary final consonant, such as *<อุตสาหกรรม> for <อุตสาหกรรม> /ʔùtsǎ:hàkam/ 'industry', or adding an unnecessary final consonant, such as *<มาก> for <มา> /ma:/ 'come'.

4.1.1.4 Thai unpronounced letters and errors in writing unpronounced letters

Both consonants and vowels can be unpronounced in Thai. According to Danvivathana (1981), there are three types of unpronounced letters in Thai: 1) marked unpronounced consonant letters, referring to the consonant letters under a sound-killing marker <็> or <การันต์> /ka:ran/, such as <ต์> in <รถยนต์> /rótʰjɔn/ 'automobile'; 2) unmarked unpronounced consonant letters, referring to the unpronounced consonant letter <ร> /r/ without any marker, such as <ร> in <บัตร> /bát/ 'card' or in <สามารถ> /sǎ:mà:t/ 'be able to'; 3) unmarked unpronounced vowel

letters, such as <็> in <อนุมัติ> /ʔánú má t/ ‘approve’ or <ุ> in <ธาตุ> /t^hà:t/ ‘element’.

Making errors in writing unpronounced letters refers to failing to choose the correct unpronounced letter, such as *<โทรทัศน์> for <โทรทัศน์> /t^ho:rát^hát/ ‘television’, not writing a necessary unpronounced letter, such as *<อนุมัติ> for <อนุมัติ> /ʔánú má t/ ‘approve’, or adding some unpronounced letters when they are not needed, such as *<ผูกพัน> for <ผูกพัน> /p^hù:kp^han/ ‘commit’.

4.1.1.5 Thai tone markers and errors in writing tone markers

There are five tone values in Standard Thai, namely, mid tone or <เสียงสามัญ> /sǐaŋsǎ:man/, low tone or <เสียงเอก> /sǐaŋʔè:k/, falling tone or <เสียงโท> /sǐaŋ^ho:/, high tone or <เสียงตรี> /sǐaŋtri:/, and rising tone or <เสียงจัตวา> /sǐaŋtǎtǎwa:/, as illustrated in Figure 4-2 (Retrieved from <http://www.thai-language.com/ref/tones>).

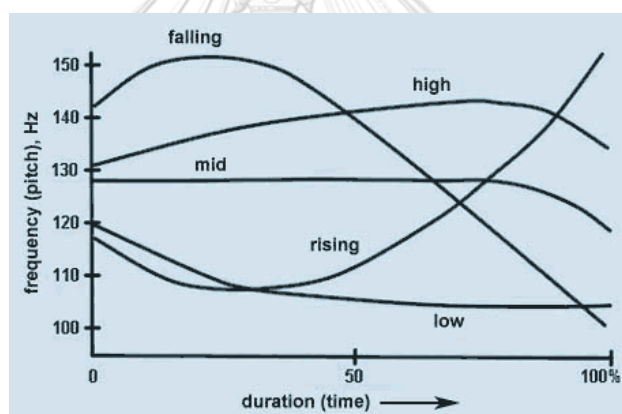


Figure 4-2 The linguistic description of five tones in Thai

Four tone markers are employed since the mid tone in Thai does not have a tone marker to indicate. The four tone markers are <่> or <ไม้เอก> /mǎjʔè:k/, <้> or <ไม้โท> /mǎjt^ho:/, <๊> or <ไม้ตรี> /mǎjtri:/, and <๋> or <ไม้จัตวา> /mǎjtǎtǎwa:/. All the tone markers in Thai are superscripts written above vowel or consonant letters.

Moreover, as shown in Table 4-4 (Retrieved from <http://www.thai-language.com/ref/tone-rules>), the rules to determine tone value of syllables are extremely complicated. Tone markers, the class of initial consonants, along with the

Making errors in writing tone markers means failing to choose the correct tone marker for the word, such as *<จนกระทั่ง> for <จนกระทั่ง> /tɕonkràt^hàŋ/ ‘until’, not writing the necessary tone marker, such as *<ดั้งเดิม> for <ดั้งเดิม> /dàŋdɤ:m/ ‘traditional’, adding an unnecessary tone marker, such as *<สดใส> for <สดใส> /sòtsǎj/ ‘to be bright’, or putting the tone marker in the incorrect position, such as *<แหล่ง> for <แหล่ง> /lɛ:ŋ/ ‘source’.

As mentioned in 3.4.2, each word written by the participants in their compositions and dictation answer sheets (See 3.1.2.2 and 3.1.2.3) was scrutinized for spelling errors. The frequency counting was based on tokens. Each error was recorded as one occurrence. For example, *<กงสุล> for <กงสุล> /kɔŋsǔn/ ‘consul’ was recorded as two occurrences. One was categorized into spelling errors in vowel substitution because the speller substituted <ู> /u:/ for <ุ> /u/, the other was classified into initial consonant substitution because the speller substituted <ศ> /s/ for <ส> /s/. The exactly same error was counted again as one occurrence. In other words, occurrences of errors were counted no matter whether they repeated or not. For example, eight students omitted the <-ะ> /a/ in the word <สะดวกสบาย> /sàdùaksàba:j/ ‘convenient’, then eight occurrences were counted and classified into the type of vowel omission. The frequencies and percentage of all the patterns found are presented in Table 4-5.

Table 4-5 Common spelling errors in Thai classified by phonological features

Patterns of spelling errors	Frequency	Percentage	Participants ¹¹
Initial consonants	827	30.8%	84
Vowels	754	28.0%	78
Final consonants	621	23.1%	80
Unpronounced letters	388	14.4%	70
Tone markers	83	3.1%	41
Others	16	0.6%	15
Total	2689	100%	90

In total, 2689 spelling errors were made by ninety students in their compositions and dictation answer sheets. As shown in Table 4-5, the most common spelling errors fall into the initial consonant type, which accounts for 30.8 percent of all the errors. The

¹¹ Participants mean the number of the students who made spelling errors

spelling errors in vowel writing and final consonant writing also occupy a relatively high proportion, taking up 28.0 percent and 23.1 percent respectively. The percentage of the errors in unpronounced letters is 14.4 percent, which is much lower than the percentage of the spelling errors in initial consonants, vowels, and final consonants; however, it does not mean that the unpronounced letters are easier than other patterns. It might be because that the unpronounced letters occur much less than initial consonants, vowels, and final consonants both in students' compositions and in the dictation. Compared to the other patterns, the spelling errors in tone makers have an extremely small number (only about 3 percent). Sixteen misspelled words cannot be grouped into those five types, so they will be discussed separately.

4.1.2 Patterns of spelling errors classified in the second dimension

The second dimension of the classification concerns alphabetic order of misspelled words. The position and status of the misspelled parts were taken into consideration. Based on the way of classifying spelling errors used by Cook (1999), Gunion (2012), Golshan and Reigani (2015), each pattern listed in Table 4-5 except "others" was further classified into four sub-categories: substitution, omission, insertion, and misplacement. The following definitions of these patterns are based on by Ellis (1994):

- 1) Substitution: selecting incorrect elements to replace the correct ones;
- 2) Omission: leaving out required elements;
- 3) Insertion: adding unnecessary elements;
- 4) Misplacement: putting the elements in the wrong position.

The four patterns are applied to the analysis with examples as follows:

- 1) Substitution of incorrect vowels such as *<ผูกพัน> for <ผูกพัน> /p^hu:kp^han/ 'associate', initial consonants such as *<อนุมัติ> for <อนุมัติ> /ʔànúmat/ 'approve', final consonants such as *<รำคาน> for <รำคาญ> /ramk^ha:n/ 'to be annoyed', unpronounced letters such as *<ศัพท์> for <ศัพท์> /sàp/ 'vocabulary, or tone markers such as *<แม้แต่> for <แม้แต่> /mɛ:tɛ:/ 'even';
- 2) Omission of required vowels such as *<กรกฎาคม> for <กรกฎาคม> /kàràkàda:k^hom/ 'July', initial consonants such as *<หลงใหล> for <หลงใหล> /lǒŋlǎj/ 'to be fascinated', final consonants such as *<ประสบการณ์> for <ประสบการณ์> /pràsòpka:n/

‘experience’, unpronounced letters *<สร้างสรร> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’, or tone markers such as *<ดั้งเดิม> for <ดั้งเดิม> /dâŋdɛ:m/ ‘traditional’;

- 3) Insertion of unnecessary vowels such as *<วัฒนธรรม> for <วัฒนธรรม> /wát^hánát^ham/ ‘culture’, initial consonants such as *<สับประรด> for <สับประรด> /sàpàrót/ ‘pineapple’, final consonants such as *<มาก> for <มา> /ma:/ ‘come’, unpronounced letters such as *<ผูกพัน> for <ผูกพัน> /p^hù:kp^han/ ‘commit’, or tone markers such as *<เปียก> for <เปียก> /piak/ ‘wet’;
- 4) Misplacement of vowels or tone markers in wrong position, such as *<ทรัพย์สิน> for <ทรัพย์สิน> /sápsin/ ‘asset’ or *<สร้างสรร> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’.

4.2 Common patterns of spelling errors in Thai in two dimensions

In this section, common patterns of spelling errors in Thai are explained in terms of the two dimensions or criteria as shown above. The presentation of the spelling errors made by different groups of students in the next chapter will follow this order of presentation.

4.2.1 Errors in writing vowels

Based on how vowels in the words are misspelled, there are four sub-categories in errors in writing vowels; namely, substitution, omission, insertion, and misplacement.

1) Substitution:

The students substitute the incorrect vowel for the correct one, such as *<รักใคร> for <รักใคร> /rákk^hrâj/ ‘love’, *<บันดา> for <บรรดา> /banda:/ ‘all’, and *<อีก> for <อีก> /ʔi:k/ ‘again’;

2) Omission:

The students omit the required vowel, such as *<กรกฎาคม> for <กรกฎาคม> /kàràkàda:k^hom/ ‘July’, *<สามัคคี> for <สามัคคี> /sǎ:mákk^hi:/ ‘harmony’, and *<สะดวกสบาย> for <สะดวกสบาย> /sàdùaksàba:j/ ‘convenient’.

3) Insertion:

The students insert other unnecessary vowel, such as *<คณะบดี> for <คณะบดี>

/kʰánáɔːdi/ ‘dean’, *<สะถานที่> for <สถานที่> /sàtʰàːntʰi/ ‘place’, and *<บอริการ> for <บริการ> /bɔːrikaːn/ ‘service’;

4) Misplacement:

The students put the vowel letter in the wrong position, such as *<เผิชญ> for <เผชิญ> /pʰàtɕʰɛːn/ ‘confront’, *<เค็รื่องมือ> for <เครื่องมือ> /kʰrɯ̃ŋmɯː/ ‘tool’, and *<เค็รียด> for <เครียด> /kʰrɯ̃t/ ‘worried’.

4.2.2 Errors in writing initial consonants

Since misplacement is not found among the errors in initial consonants, so there are three sub-categories in the errors in writing initial consonants according to how initial consonants in the words are misspelled; namely, substitution, omission, and insertion.

1) Substitution:

The students substitute the incorrect initial consonant for the correct one, such as *<ลำไ้> for <ลำไส้> /lamsâj/ ‘intestine’, *<ฉายแดน> for <ชายแดน> /tɕʰaːjɔːn/ ‘frontier’, *<เมืองหรง> for <เมืองหลวง> /mɯ̃ŋlɯ̃ŋ/ ‘capital’, and *<สดชื่น> for <สดชื่น> /sòttɕʰhɯ̃ːn/ ‘to be fresh’;

2) Omission:

The students omit part of initial consonant cluster, such as *<ปับปรุง> for <ปรับปรุง> /pràpprɯ̃ŋ/ ‘adjust’ and *<สร้าง> for <สร้าง> /sâːŋ/ ‘build’;

3) Insertion:

The students insert other unnecessary initial consonant, such as *<องกราน> for <องค์การ> /ɔŋkaːn/ ‘organization’, *<อัยง> for <ยัง> /jan/ ‘still’, *<ขหนม> for <ขนม> /kʰànɔ̃m/ ‘sweets’, and *<เศร้าโศกร> for <เศร้าโศก> /sâusòːk/ ‘depressed’;

4.2.3 Errors in writing final consonants

Misplacement is not found among the spelling errors in final consonants either, so based on how final consonants in the words are misspelled, there are three sub-categories in the errors in writing final consonants, including substitution, omission, and insertion.

1) Substitution:

The students substitute the incorrect final consonant for the correct one, such as *<ประเทศ> for <ประเทศ> /pràt^hè:t/ ‘country’, *<สามัคคี> for <สามัคคี> /sǎmákk^hi:/ ‘harmony’, *<เครียด> for <เครียด> /k^hriat/ ‘worried’, and *<สิ่ง> for <สิ้น> /sín/ ‘to be finished’;

2) Omission:

The students omit the required final consonant, such as *<ประสบการณ์> for <ประสบการณ์> /pràsòpka:n/ ‘experience’ and *<แน่นแฟ้น> for <แน่นแฟ้น> /nê:nfǎn:/ ‘firmly’;

3) Insertion

The students insert other redundant final consonant in the word, such as *<แต่> for <แต่> /tè:/ ‘but’ and *<มาก> for <มา> /ma:/ ‘come’.

4.2.4 Errors in writing unpronounced letters

Based on how unpronounced letters in the words are misspelled, there are three sub-categories in the errors in unpronounced letters: substitution, omission, and insertion. Misplacement in unpronounced letters is not found.

1) Substitution:

The students substitute the incorrect unpronounced letter for the correct one, such as *<ศัพท์>, *<ศัพท์>, *<ศัพท์> for <ศัพท์> /sàp/ ‘vocabulary’ and *<มอเตอร์ไซค์>, *<มอเตอร์ไซด์>, *<มอเตอร์ไซด์> for <มอเตอร์ไซด์> /mò:tɔ:saj/ ‘motorcycle’;

2) Omission:

The students omit the required unpronounced letter, such as *<โทรทัศน์> for <โทรทัศน์> /t^hò:rát^hát/ ‘television’, *<ศีรษะ> for <ศีรษะ> /sǐ:sà/ ‘head’, and *<อนุมัติ> for <อนุมัติ> /ʔànúmat/ ‘approve’;

3) Insertion:

The students insert other unnecessary unpronounced letter, such as *<ฟุตบอล> for <ฟุตบอล> /fútbo:n/ ‘football’ and *<อนุญาต> for <อนุญาต> /ʔànújât/ ‘allow’.

4.2.5 Errors in writing tone markers

Based on how tone markers in the words are misspelled, there are four sub-categories in the errors in writing tone markers; namely, substitution, omission, insertion, and misplacement.

1) Substitution:

The students substitute the incorrect tone marker for the correct one, such as *<กว้าง> for <กว้าง> /kwâ:ŋ/ ‘widely’ and *<แม่แต่> for <แม่แต่> /mɛ:tɛ:/ ‘even’;

2) Omission:

The students omit the required tone marker, such as *<งูเหา> for <งูเหา> /ŋu:həu/ ‘cobra’, *<เซียงไฮ> for <เซียงไฮ> /sianháj/ ‘Shanghai’, and *<เฉลี่ย> for <เฉลี่ย> /tɕʰàliə/ ‘average’;

3) Insertion:

The students insert other unnecessary tone marker, such as *<เปียก> for <เปียก> /piak/ ‘wet’, *<สดใส> for <สดใส> /sòtsǎj/ ‘be bright’, and *<เบียร์> for <เบียร์> /bia/ ‘beer’;

4) Misplacement:

The students put the tone marker into other incorrect position, such as *<สร้าง> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’, *<เศร้า> for <เศร้าโศก> /sâusò:k/ ‘to be depressed’, and *<เครื่องมือ> for <เครื่องมือ> /kʰwǎŋmw:/ ‘tool’.

To sum up, all the spelling errors were first classified by phonological features into five patterns; namely, errors in writing vowels, errors in writing initial consonants, errors in writing final consonants, errors in writing unpronounced letters, and errors in writing tone markers. Further, each pattern was further classified into substitution, omission, insertion, or misplacement according to how the misspelled words were written or how they were reconstructed. Figure 4-3 presents the frequency of each pattern.

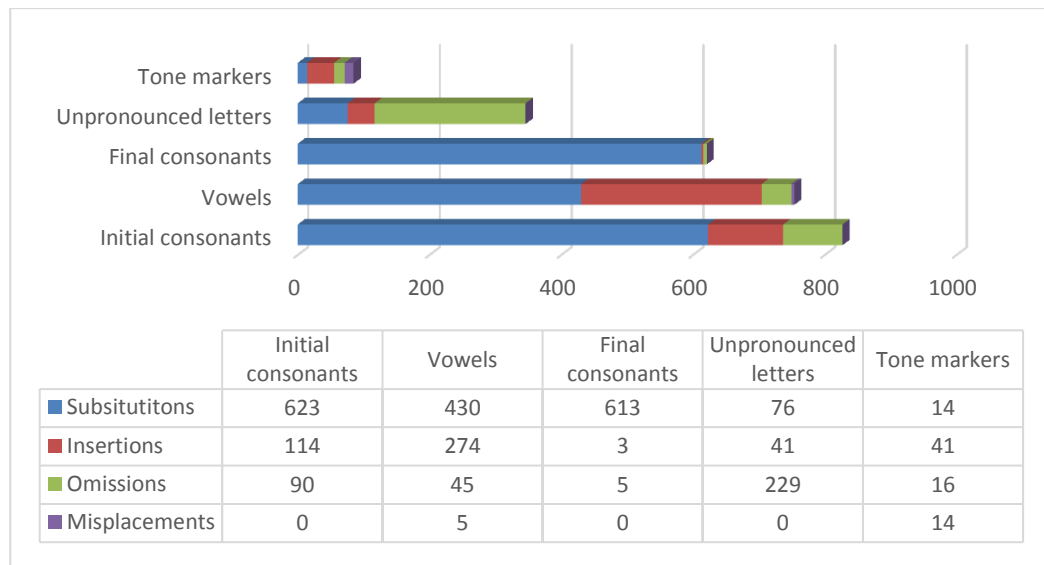


Figure 4-3 Percentage of common patterns of spelling errors in Thai

As shown in Figure 4-3, substitution of initial consonants and final consonants are the most common spelling errors. Substitution and insertion in vowels, omission in unpronounced letters, and insertion in initial consonants are also relatively high. On the other hand, misplacement is rarely seen and only appears in vowels and tone markers.

In the next chapter, the spelling errors made by Chinese, Lao, and Thai students will be explained separately and compared with one another.

Chapter 5 Patterns of Spelling Errors in Thai Made by Chinese and Lao Students

This chapter presents the patterns of spelling errors made by Chinese and Lao students. The frequency of occurrences of each pattern and some examples found from the participants are discussed as well. Moreover, the spelling errors made by different groups of participants are also compared with one another.

5.1 Patterns of spelling errors made by Chinese students

Totally, 859 spelling errors were found from the data collected from Chinese students. The patterns and frequency of occurrences of each pattern are demonstrated in Table 5-1. Ten misspelled words cannot be grouped into the five categories classified by phonological features, so they are classified into “others” and will be discussed separately.

Table 5-1 Patterns of spelling errors in Thai made by Chinese students classified by phonological features

Patterns of spelling errors	Frequency	Percentage	Participants
Vowels	322	37.5%	30
Initial consonants	178	20.7%	30
Final consonants	175	20.4%	30
Unpronounced letters	155	18.0%	30
Tone markers	19	2.2%	11
Others	10	1.2%	10
total	859	100.0%	30

The findings reveal that the biggest difficulty of Chinese students is Thai vowel spelling. Initial consonants and final consonants seem to be equally difficult for Chinese students, which account for 20.7 percent and 20.4 percent respectively. Another 18 percent of the errors were grouped as the errors in unpronounced letters. On the other hand, the errors regarding tone markers are much rarer (only about 1 percent).

Classified in another dimension (See 4.1.2), all the patterns of errors were further divided into substitution, omission, insertion, and misplacement; however, misplacement was not found among Chinese students. Thus, the errors are labeled in the following sections as substitution, omission, and insertion reflecting how the misspelled words were written.

5.1.1 Chinese students' spelling errors in vowel letters

Totally, 322 spelling errors were found in vowel letters, as shown in Table 5-2. A predominant percentage (79.5 percent) of the spelling errors falls into substitution. Moreover, it is notable that substitution exists in every Chinese students' output. On the other hand, insertion and omission were also found among Chinese students but with a relatively smaller number.

Table 5-2 Spelling errors in vowel letters made by Chinese students classified by how vowel letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	256	79.5%	30
Insertion	39	12.1%	20
Omission	27	8.4%	20
Total	322	100.0%	30

5.1.1.1 Substitution of vowel letters

Three types of the spelling errors related to substitution of vowel letters were found; namely, substituting long vowels for short vowels and vice versa, substituting one vowel letter with another representing a homophonic sound, and substituting a vowel letter with another representing a similar sound.

Firstly, as shown in Table 5-3, many vowels with different duration were misused by Chinese students, both monophthongs such as <◌◌> /u/ and <◌◌◌> /u:/, <-◌> /a/ and <-◌◌> /a:/, <◌◌◌> /i/ and <◌◌◌◌> /i:/, or <-◌-◌> /e/ and <-◌-◌◌> /e:/, and other vowels such as <◌◌-◌> /aj/, <◌◌-◌◌> /aj/, <◌◌◌◌> /aj/ and <-◌-◌◌> /aj/, <-◌-◌> /au/ and <-◌-◌◌> /a:u/.

Table 5-3 Examples of spelling errors made by Chinese students caused by substituting long for short vowels and vice versa

Vowel letters	Misspelled words	Correct words	Meaning
<ุ> /u/ → <ู> /u:/	*กงสุล /kɔŋsǔ:n/	กงสุล /kɔŋsǔn/	consul
<ู> /u:/ → <ุ> /u/	*ผูกพัน /p ^h ùkp ^h an/	ผูกพัน /p ^h ù:kp ^h an/	associate
<ะ> /a/ → <า> /a:/	*สัมพันธ์ /sǎmp ^h a:n/	สัมพันธ์ /sǎmp ^h an/	relations
<า> /a:/ → <ะ> /a/	*รำคาญ /ramk ^h an/	รำคาญ /ramk ^h a:n/	to be annoyed
<ี> /i/ → <ี้> /i:/	*กลิ่น /kli:n/	กลิ่น /klin/	smell
<ี้> /i:/ → <ี> /i/	*ปีก /pik/	ปีก /pi:k/	wing
<เ> /e/ → <ะ> /e/	*สังเกต /sǎŋkèt/	สังเกต /sǎŋkèt/	observe
<ัย> /aj/ → <าย> /aj:/	*ชัยชนะ /tɕ ^h ajtɕ ^h áná/	ชัยชนะ /tɕ ^h ajtɕ ^h áná/	victory
<ไ> /aj/ → <าย> /aj:/	*หลงใหล /lɔŋlǎ:j/	หลงใหล /lɔŋlǎj/	to be fascinated
<เา> /au/ → <าว> /a:u/	*บรรเทา /bant ^h a:u/	บรรเทา /bant ^h au/	relieve

Secondly, Chinese students also substituted one vowel letter with another representing the same sound; for example, 1) the phoneme /aj/ can be represented by three different forms, i.e., <ไ>, <เ>, and <ัย>, so they may replace one with another; 2) the syllable /an/ can be represented by <ัน>, <รร>, <รรณ>, so this causes confusion and one is likely to be replaced with another by Chinese students; 3) the syllable /am/ also has three ways of writing: <ัม>, <ำ>, and <รรม> and thus cause one to be substituted with another.

Table 5-4 Examples of spelling errors made by Chinese students caused by substituting one vowel letter with another representing a homophonic sound

Vowel letters	Misspelled words	Correct words	Meaning
<ไ> /aj/ → <เ> /aj/	*หลงใหล /lɔŋlǎj/	หลงใหล /lɔŋlǎj/	to be fascinated
<ไ> /aj/ → <เ> /aj/	*ลำไส้ /lamsâj/	ลำไส้ /lamsâj/	intestine
<รร>/an/ → <ัน> /an/	*ไม้บรรทัด /májbant ^h át/	ไม้บรรทัด /májbant ^h át/	ruler
<ัน>/an/ → <รรณ> /an/	*ผลิตภัณฑ์ /p ^h àlittàp ^h an/	ผลิตภัณฑ์ /p ^h àlittàp ^h an/	product
<ำ> /am/ → <รรม> /am/	*กรรมไร /kamraj/	กำไร /kamraj/	profit
<รรม> /am/ → <ำ> /am/	*วัฒนธรรม /wát ^h ána:t ^h am/	วัฒนธรรม /wát ^h ánát ^h am/	culture
<ัม> /am/ → <ำ> /am/	*สัมพันธ์ /sǎmp ^h an/	สัมพันธ์ /sǎmp ^h an/	relations

Thirdly, Chinese students also made spelling errors when encountering vowel letters with relatively similar pronunciation for them. These vowels can be summarized into three groups: 1) three back rounded vowels: <ุ> /u/ and <ู> /u:/, <ะ> /ɔ/ and <-

อ> /ว:/, <โ-ะ> /อ/ and <โ-> /อ:/; 2) <เ-า> /au/ and <-อ> /ว:/; 3) <-า> /a:/ and <แ-> /ε:/ when spelled with a final consonant.

Table 5-5 Examples of spelling errors made by Chinese students caused by substituting one vowel letter with another with similar pronunciation

Vowel letters	Misspelled words	Correct words	Meaning
<อ> /ว:/ → <-อ> /ว:/	*ปรับปรอง /pràpprɔŋ/	ปรับปรุง /pràpprun/	adjust
<อ> /ว:/ → <โ-ะ> /อ/	*สมุด /sà mòt/	สมุด /sà mùt/	notebook
<โ-ะ> /อ/ → <อ> /ว:/	*กงสุต /kɔŋsǔn/	กงสุล /kɔŋsǔl/	consul
<-อ> /ว:/ → <โ-> /อ:/	*โมเตอร์ไซ /mɔ:tɔ:saj/	มอเตอร์ไซด์ /mɔ:tɔ:saj/	motorcycle
<โ-ะ> /อ/ → <-อ> /ว:/	*ประสบการณ์ /pràsɔ:pka:n/	ประสบการณ์ /pràsɔ:pka:n/	experience
<เ-า> /au/ → <-อ> /ว:/	*งูห่อ /ŋu:hò:/	งูเห่า /ŋu:hàu/	cobra
<แ-> /ε:/ → <-า> /a:/	*แน่นพ้าน /nâ:nfá:n/	แน่นแฟ้น /nâ:nfá:n/	firmly
<แ-> /ε:/ → <-า> /a:/	*พร่ายหลาย /p ^h râ:jlâ:j/	แพร่หลาย /p ^h râ:lé:j/	extensively
<-า> /a:/ → <แ-> /ε:/	*รามแคะญ /ra:m ^h é:n/	รำคาญ /ram ^h a:n/	to be annoyed
<-า> /a:/ → <แ-> /ε:/	*อีสาน /ʔi:sá:n/	อีสาน /ʔi:sá:n/	northeast

5.1.1.2 Insertion of vowel letters

Insertion of vowel letters is not as common as substitution. In Thai, some vowel letters are pronounced but not written, for example, <-อ> /ว:/ and <-ะ> /a/ are pronounced in the word <ทรมาน> /t^hɔ:râma:n/ ‘torture’ but they are not written. As a result, Chinese students tended to insert some unnecessary vowel letters. Moreover, they were always in a dilemma whether to insert a long vowel or a short one according to the pronunciation of original words, which reflects that Chinese students are not sensitive to length of sounds. Some spelling errors regarding insertion of vowels are listed in Table 5-6.

Table 5-6 Examples of spelling errors made by Chinese students caused by inserting vowel letters

Inserted vowels	Misspelled words	Correct words	Meaning
inserting <-า> /a:/	*กรกาฎาคม	กรกฎาคม /kàràkàda:k ^h om/	July
inserting <-า> /a:/	*วัฒนธรรม	วัฒนธรรม /wát ^h ánát ^h am/	culture
inserting <-า> /a:/	*อนาคต	อนาคต /ʔàna:k ^h ót/	future
inserting <-า> /a:/ and <-อ> /o:/	*ทอรามาณ	ทรมาน /t ^h o:ràma:n/	torture
inserting <-ะ> /a/	*คณบดี	คณบดี /k ^h ánábv:di:/	dean
inserting <-ั> /a/	*ปฏิเสธ	ปฏิเสธ /pàtisè:t/	refuse
inserting <-ั> /a/	*กรัฎาคม	กรกฎาคม /kàràkàda:k ^h om/	July

5.1.1.3 Omission of vowel letters

Chinese students made the least spelling errors in vowel omission. Twenty-seven spelling errors in vowel omission were made by twenty Chinese students. Table 5-7 lists some errors in omission of vowel letters made by Chinese students.

Table 5-7 Examples of spelling errors made by Chinese students caused by omitting vowel letters

Omitted vowels	Misspelled words	Correct words	Meaning
omitting <-า> /a:/	*สามัคคี	สามัคคี /sǎ:mák ^h i:/	harmony
	*กรกฎาคม	กรกฎาคม /kàràkàda:k ^h om/	July
omitting <-ะ> /a/	*สะดวกสบาย	สะดวกสบาย /sàdvaksàba:j/	convenient

5.1.2 Chinese students' spelling errors in initial consonant letters

Chinese students made 178 spelling errors in initial consonant letters. The substitution errors account for an absolute predominant percentage of all errors. On the other hand, omission and insertion are much more infrequent, and only some scattered errors were found.

Table 5-8 Spelling errors in initial consonant letters made by Chinese students classified by how initial consonant letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	174	97.8%	29
Omission	3	1.7%	3
Insertion	1	0.5%	1
Total	178	100.0%	30

5.1.2.1 Substitution of initial consonant letters

As mentioned earlier, most of the spelling errors in initial letters are the substitution type. Five groups of substitution of initial consonant letters are found. The first group is that Chinese students substituted an initial consonant letter with another representing the same sound, for example, <ส>, <ศ> and <ษ> representing /s/ sound, <ต> and <ฏ> representing /t/ sound, <ค> and <ข> representing /k^h/ sound, etc. Some examples are listed in Table 5-9.

Table 5-9 Examples of spelling errors made by Chinese students caused by substituting one initial consonant letter with another representing a homophonic sound

Initial consonant letters	Misspelled words	Correct words	Meaning
<ส> /s/ → <ศ> /s/	*กงสุล /kɔŋsǔn/	กงสุล /kɔŋsǔn/	consul
<ศ> /s/ → <ส> /s/	*เสร์้าโศก /sǎusò:k/	เศร์้าโศก /sǎusò:k/	depressed
<ษ> /s/ → <ส> /s/	*โฆสนา /k ^h ò:tsàna/	โฆษณา /k ^h ò:tsàna/	advertisement
<น> /n/ → <ณ> /n/	*อนุมัติ /ʔànúmát/	อนุมัติ /ʔànúmát/	approve
<ณ> /n/ → <น> /n/	*คนบตี /k ^h ánábɔ:di/	คนบตี /k ^h ánábɔ:di/	dean
<ช> /s/ → <ทร> /s/	*แทรกแทรก /sǎ:kse:ŋ/	แทรกแซง /sǎ:kse:ŋ/	intervene
<ทร> /s/ → <ช> /s/	*แซกแซง /sǎ:kse:ŋ/	แทรกแซง /sǎ:kse:ŋ/	intervene
<ข> /k ^h / → <ค> /k ^h /	*โคสนา /k ^h ò:tsàna/	โฆษณา /k ^h ò:tsàna/	advertisement

Secondly, voiced and voiceless initial consonant letters were misspelled by Chinese students as well. There are three pairs of voiced and voiceless initial consonants in the Standard Thai; i.e., <ด> /d/ and <ต> /t/, <ฎ> /d/ and <ฏ> /t/, <บ> /b/ and <ป> /p/. It seems that all the three groups of voiced and voiceless consonants caused Chinese students to commit some spelling errors. Some examples are given in Table 5-10.

Table 5-10 Examples of spelling errors made by Chinese students caused by substituting voiceless for voiced initial consonants and vice versa

Initial consonant letters	Misspelled words	Correct words	Meaning
<ด> /d/ → <ต> /t/	*อดีต /ʔàtì:t/	อดีต /ʔàdì:t/	former
<ฎ> /d/ → <ฏ> /t/	*กรกฎาคม /kàràkàta:k ^h om/	กรกฎาคม /kàràkàda:k ^h om/	July
<ฏ> /t/ → <ฎ> /d/	*ปฏิเสธ /pàdisè:t/	ปฏิเสธ /pàtisè:t/	refuse
<ป> /p/ → <บ> /b/	*ปัจจุบัน /bàtɕùban/	ปัจจุบัน /pàttɕùban/	present
<บ> /b/ → <ป> /p/	*ปะหมี่ /pàmi:/	บะหมี่ /bàmi:/	noodle

The third group is the misuse between the voiced lateral <ล> /l/ and voiced retroflex or weak trill <ร> /r/. Chinese students substituted <ร> /r/ for <ล> /l/ and vice versa as shown in Table 5-11.

Table 5-11 Examples of spelling errors made by Chinese students caused by substituting <ร> /r/ for <ล> /l/ and vice versa

Initial consonant letters	Misspelled words	Correct words	Meaning
<ล> /l/ → <ร> /r/	*เรียนแบบ /rianbɛ:p/	เลียนแบบ /lianbɛ:p/	copy
<ร> /r/ → <ล> /l/	*กำไร /kamlaj/	กำไร /kamraj/	profit

The next group is that Chinese students misused some paired low-class and high-class initial consonant letters. As mentioned in 4.1.1, all the initial consonant letters in Thai are classified into three classes: low, middle, and high. Moreover, there exist certain corresponding relationships between some low-class consonants and high-class consonants. They have the same phonetic transcription but with different inherent tones, which are called <อักษรคู่> /ʔaksɔːnkʰuː/ ‘paired consonants’. Table 5-12 presents the relationship between them and Table 5-13 demonstrated some errors regarding the misuse between low and high initial consonants.

Table 5-12 Low-class and high-class initial consonant letters in Standard Thai

Phonetic transcription	High initial consonants	Low initial consonants
/k ^h /	ข	ค ฃ
/tɕ/	จ	ช ฌ
/t ^h /	ฐ ถ	ท ฒ ฑ ฒ
/p ^h /	ผ	พ ภ
/f/	ฝ	ฟ
/s/	ศ ษ ส	ซ
/h/	ห	ฮ

Table 5-13 Examples of spelling errors made by Chinese students caused by substituting high-class for low-class initial consonant letters and vice versa

Initial consonant letters	Misspelled words	Correct words	Meaning
<ค> /k ^h / → <ข> /k ^h /	*สามัคคี	สามัคคี /sǎ:mákk ^h iː/	harmony
<ฟ> /f/ → <ฝ> /f/	*แน่นแฟ้น	แน่นแฟ้น /nɛːnfɛːn/	firmly
<ส> /s/ → <ซ> /s/	*ลำไส้	ลำไส้ /lamsǎj/	intestine
<ผ> /p ^h / → <พ> /p ^h /	*เผชิญ	เผชิญ /p ^h àtɕ ^h :n/	confront
<ผ> /p ^h / → <ภ> /p ^h /	*ผูกพัน	ผูกพัน /p ^h uːkp ^h an/	commit

The last group of substitution of initial consonants is some irregular spelling errors. For example, some Chinese students substituted the voiced lateral <ล> /l/ for voiced

dental nasal <น> /n/, such as the misspelled word *<แน่นเพื่อน> /lɛːnfɛːn/ for <แน่นเพื่อน> /nɛːnfɛːn/ ‘firmly’ or *<ชัยชละ> /tɕʰajtɕʰálá/ for <ชัยชนะ> /tɕʰajtɕʰáná/ ‘victory’.

5.1.2.2 Omission of initial consonant letters

The spelling errors caused by omission of initial consonant letters were also found in the data collected from two Chinese students: *<ลงไล> and *<ลงไหล> for <หลงไหล> /lɔŋlǎj/ ‘to be fascinated, in which the unpronounced leading consonant letter <ห> /h/ was omitted.

5.1.2.3 Insertion of initial consonant letters

Only one spelling error was the insertion of initial consonant letters, which was *<สับประรด> for <สับปะรด> /sàpàró/ ‘pineapple’. The Chinese student inserted a <ร> /r/ in the second syllable of the word.

5.1.3 Chinese students’ spelling errors in final consonants letters

Spelling errors in final consonants are the third most spelling errors made by Chinese students. 175 spelling errors in final consonants were found, which presents 20.4 percent of the total spelling errors. Most of the spelling errors in final consonants are substitution while the errors in insertion and omission are rarely seen. All the thirty Chinese participants committed spelling errors in substitution in final consonant letters while only two of them made errors in insertion and omission respectively.

Table 5-14 Spelling errors in final consonants letters made by Chinese students classified by how final consonant letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	171	97.8%	30
Insertion	2	1.1%	2
Omission	2	1.1%	2
Total	175	100.0%	30

5.1.3.1 Substitution of final consonants letters

The spelling errors in final consonant substitution can be summarized into three categories: 1) substituting a final consonant letter with another representing a homophonic sound; 2) substituting a final consonant letter with another representing a similar sound; 3) other irregular substitution of final consonant letters.

The first category is substituting one final consonant letter with another representing a homophonic sound, which is also the most common spelling errors in substitution of final consonants. The phoneme-multigrapheme correspondences in Thai final consonants have been explained in 4.1.1. The unbalanced phenomenon exists in many Thai final consonant phonemes, especially /t/ and /n/, which can be represented by many different graphemes.

Table 5-15 Examples of spelling errors made by Chinese students caused by substituting one final consonant letter with another representing a homophonic sound

Final consonant letters	Misspelled words	Correct words	Meaning
<ธ>/t/ ¹² → <ต> /t/	*ปฏิเสธ /pàtisè:t/	ปฏิเสธ /pàtisè:t/	refuse
<ส> /t/ → <ศ> /t/	*โอกาส /ʋo:kà:t/	โอกาส /ʋo:kà:t/	chance
<ต> /t/ → <ช> /t/	*สังเกต /sàŋkè:t/	สังเกต /sàŋkè:t/	observe
<ฎ> /t/ → <ฏ> /t/	*กฎหมาย /kòtmǎ:j/	กฎหมาย /kòtmǎ:j/	law
<ต> /t/ → <ด> /t/	*อนุญาต /ʋànújâ:t/	อนุญาต /ʋànújâ:t/	allow
<ฎ> /t/ → <ด> /t/	*ปรากฏ /pra:kòt/	ปรากฏ /pra:kòt/	appear
<น> /n/ → <ณ> /n/	*ทรมาน /tʰv:ràma:n/	ทรมาน /tʰv:ràma:n/	torture
<น> /n/ → <ร> /n/	*ทรมาร /tʰv:ràma:n/	ทรมาน /tʰv:ràma:n/	torture
<ญ> /n/ → <น> /n/	*รำคาญ /ramkʰa:n/	รำคาญ /ramkʰa:n/	be annoyed
<ล> /n/ → <ร> /n/	*กงสุร /kɔŋsǔn/	กงสุล /kɔŋsǔn/	consul
<ณ> /n/ → <ญ> /n/	*ประมาณ /pràma:n/	ประมาณ /pràma:n/	around
<ญ> /n/ → <ณ> /n/	*เผชิญ /pʰàtɕʰ:n/	เผชิญ /pʰàtɕʰ:n/	confront
<พ> /p/ → <บ> /p/	*ทรัพย์สิน /sǎpsǐn/	ทรัพย์สิน /sǎpsǐn/	asset

The second category is also very common among the spelling errors made by Chinese students, which is substituting a final consonant letter with another representing a similar sound. Since there are some unique final consonant phonemes in Thai which absent from Chinese, many Chinese students cannot distinguish them accurately, which causes many spelling errors in their writing.

¹² The transcription provided here is the phoneme of the consonant letter in a final position, not the transcription of initial consonant letters.

Table 5-16 Examples of spelling errors made by Chinese students caused by substituting one final consonant letter with another with similar pronunciation

Final consonant letters	Misspelled words	Correct words	Meaning
<ธ> /t/ → <บ> /p/	*ปฏิเสธ /pàtisè:p/	ปฏิเสธ /pàtisè:t/	refuse
<ต> /t/ → <ก> /k/	*อนุมัติ /ʔànú mák/	อนุมัติ /ʔànú má:t/	allow
<ด> /t/ → <ก> /k/	*เครียด /k ^h riák/	เครียด /k ^h riát/	worried
<ก> /k/ → <ด> /t/	*ผูกพัน /p ^h u:tp ^h an/	ผูกพัน /p ^h u:kp ^h an/	commit
<ม> /m/ → <น> /n/	*ขนม /k ^h anǒn/	ขนม /k ^h anǒm/	sweets
<น> /n/ → <ง> /ŋ/	*สิ่ง /sǐŋ/	สิ่ง /sǐn/	be finished
<น> /n/ → <ม> /m/	*กลิ่น /k ^h lím/	กลิ่น /k ^h lín/	smell
<ง> /ŋ/ → <ม> /m/	*สังเกต /sǎmkè:t/	สังเกต /sǎŋkè:t/	observe
<ง> /ŋ/ → <น> /n/	*แทรกแซง /sǎ:kse:n/	แทรกแซง /sǎ:kse:ŋ/	intervene

Additionally, two other spelling errors in substitution of final consonant letters were found: *<ผลิตภัณฑ์> for <ผลิตภัณฑ์> /p^halittàp^han/ ‘product’ and *<สะดวกสบาย> for <สะดวกสบาย> /sàdùaksàbaj/ ‘convenient’¹³.

5.1.3.2 Omission of final consonant letters

Two spelling errors are the errors in omission of final consonants letters, which are *<ประสบการณ์> for <ประสบการณ์> /pràsòpka:n/ ‘experience’ and *<แน่นแฟ้น> for <แน่นแฟ้น> /nǎ:nfǎ:n/ ‘firmly’. In the two examples here, the front nasal /n/ of the two words was omitted from the original words.

5.1.3.3 Insertion of final consonant letters

Two insertion spelling errors in final consonant letters were made by Chinese students. The first is the insertion of <ง> /ŋ/ in the word <แต่> /tǎ:/ ‘but’ and the second one is *<มาก> for <มา> /ma:/ ‘come’, in which a <ก> /g/ was inserted in the correct word.

5.1.4 Chinese students’ spelling errors in unpronounced letters

According to Table 5-17, over half of the spelling errors in unpronounced letters are omission. The spelling errors in substitution and insertion are nearly the same, which take up 25.8 percent and 23.9 percent respectively.

¹³ This is the only one example showing substitution of <น> /n/ for <ก> /k/. It may be caused by the similarity between the two velar sounds: /k/ and /n/, which makes it very possible to replace one for the other because there are no such velar sounds in the Chinese phonology. However, more examples are needed to conclude in such a way.

Table 5-17 Spelling errors in unpronounced letters made by Chinese students classified by how unpronounced letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Omission	78	50.3%	26
Substitution	40	25.8%	25
Insertion	37	23.9%	25
Total	155	100.0%	30

5.1.4.1 Omission of unpronounced letters

All the 78 spelling errors in omission of unpronounced letters can be allocated into three groups; namely, omitting unpronounced consonant letters with a sound-killing marker, omitting unpronounced consonant letter <ร> /r/ without a sound-killing marker, and omitting unpronounced vowel letters without a sound-killing marker.

Omission of consonant letters with a sound-killing marker was found. Table 5-18 gives some spelling errors regarding omitting the marked unpronounced consonant letters.

Table 5-18 Examples of spelling errors made by Chinese students caused by omitting unpronounced consonant letters with a sound-killing marker

Omitted letters	Misspelled words	Correct words	Meaning
<น>	*โทรทัศน์ /t ^h o:rat ^h at/	โทรทัศน์ /t ^h o:rat ^h at/	television
<ฑ>	*ผลิตภัณฑ์ /p ^h alittap ^h an/	ผลิตภัณฑ์ /p ^h alittap ^h an/	product
<ค>	*มอเตอร์ไซค์ /mɔ:tɕ:saj/	มอเตอร์ไซค์ /mɔ:tɕ:saj/	motorcycle
<ณ>	*ประสบการณ์ /pràsɔpka:n/	ประสบการณ์ /pràsɔpka:n/	experience
<ร>	*เบีย /bia/	เบียร์ /bia/	beer
<ค>	*สร้างสรรค์ /sâ:ŋsǎn/	สร้างสรรค์ /sâ:ŋsǎn/	create
<ย>	*ทรัพย์สิน /sǎpsǐn/	ทรัพย์สิน /sǎpsǐn/	asset

The unpronounced consonant letter <ร> /r/ without a sound-killing marker was also omitted by some Chinese students. Even though the Thai words which include the unpronounced consonant letter <ร> /r/ without a sound-killing marker are not very common, it still needs to arouse our attention since it is one of the most irregular points in Thai which is ignored by many foreign learners. Table 5-19 presents the errors made by Chinese students.

Table 5-19 Examples of spelling errors made by Chinese students caused by omitting unpronounced consonant letter <ร> /r/ without a sound-killing marker

Misspelled words	Correct words	Meaning
*สามาถ /sà:mà:t/	สามารถ /sà:mà:t/	can
*ปราถนา /prà:tt ^h à:nà:/	ปรารถนา /prà:tt ^h à:nà:/	desire
*ศีรษะ /sí:sà/	ศีรษะ /sí:sà/	head
*เกียรติ /kiat/	เกียรติ /kiat/	fame

Finally, the unpronounced vowel letters are likely to be omitted as well. Three misspelled words were found and they are listed in Table 5-20.

Table 5-20 Examples of spelling errors made by Chinese students caused by omitting unpronounced vowel letters without a sound-killing marker

Omitted letters	Misspelled words	Correct words	Meaning
<อิ>	*ประวัติ /prà:wàt/	ประวัติ /prà:wàt/	history
<อิ>	*อนุมัติ /ʔà:nú:màt/	อนุมัติ /ʔà:nú:màt/	approve
<อิ>	*ภูมิใจ /p ^h u:mtɔ ^h aj/	ภูมิใจ /p ^h u:mtɔ ^h aj/	to be proud of

5.1.4.2 Substitution of unpronounced letters

The substitution of unpronounced letters only appeared in marked unpronounced consonant letters. The spelling errors are quite irregular. Chinese students randomly chose another consonant letter to replace the right one as shown in Table 5-21.

Table 5-21 Examples of spelling errors made by Chinese students caused by substituting unpronounced consonant letters with other consonant letters

Misspelled words	Correct words	Meaning
*ศัพร์, *ศัพน์, *ศัพย์ /sàp/	ศัพท์ /sàp/	vocabulary
*โทรทัศน์, *โทรทัศน์, *โทรทัศน์ /t ^h o:rát ^h át/	โทรทัศน์ /t ^h o:rát ^h át/	television
*สัมพันธ์, *สัมพันธ์, *สัมพันธ์ /sǎmp ^h an/	สัมพันธ์ /sǎmp ^h an/	relations

5.1.4.3 Insertion of unpronounced letters

Insertion of unpronounced letters could be found in both marked unpronounced consonant letters and unpronounced vowel letters. Table 5-22 demonstrates some spelling errors that Chinese students inserted unnecessary unpronounced letters in the words.

Table 5-22 Examples of spelling errors made by Chinese students caused by inserting unpronounced letters

Inserted letters	Misspelled words	Correct words	Meaning
<ธ>	*ผูกพันธ /p ^h u:kp ^h an/	ผูกพัน /p ^h u:kp ^h an/	commit
<ล>	*ฟุตบอลล /fútbo:n/	ฟุตบอล /fútbo:n/	football
<ค>	*ประสบค /pràsòp/	ประสบ /pràsòp/	face
<ร>	*มอเตอร์ไซค์ /mò:tɕ:saj/	มอเตอร์ไซค์ /mò:tɕ:saj/	motorcycle
<ุ>	*สังเกตุ /sǎŋkè:t/	สังเกต /sǎŋkè:t/	observe
<ิ>	*อนุญาติ /ʔànújǎ:t/	อนุญาต /ʔànújǎ:t/	allow

5.1.5 Chinese students' spelling errors in tone markers

Overall, Chinese students made much fewer spelling errors in tone markers compared to other phonological features in Thai, even though the Thai language has an extremely complicated tone system. Nineteen spelling errors made by eleven Chinese students were found and they distribute in insertion, omission, and substitution.

Table 5-23 Spelling errors in tone markers made by Chinese students classified by how tone markers were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Insertion	9	47.4%	9
Omission	8	42.1%	7
Substitution	2	10.5%	2
Total	19	100.0%	11

5.1.5.1 Insertion of tone markers

The following nine words (Table 5-24) were inserted an unnecessary tone marker in the original words. All the low tone marker, falling tone markers, and rising tone marker were inserted by Chinese students.

Table 5-24 Examples of spelling errors made by Chinese students caused by inserting tone markers

Inserted tone markers	Misspelled words	Correct words	Meaning
<◌̀>	*เครียด	เครียด /k ^h riat/	worried
<◌̎>	*น้อก	นอก /nò:k/	outside
<◌̌>	*ต่อนี้	ตอนนี้ /tò:nní/	now

5.1.5.2 Omission of tone markers

Eight errors in omission of tone markers were found, which are presented in Table 5-25. Both the low and falling tone marker are likely to be omitted by Chinese students.

Table 5-25 Examples of spelling errors made by Chinese students caused by omitting tone markers

Omitted tone markers	Misspelled words	Correct words	Meaning
<◌◌>	*เครื่องมือ	เครื่องมือ /k ^h rúanqum/	tool
<◌◌◌>	*ดั้งเดิม	ดั้งเดิม /dāngdɛ:m/	traditional

5.1.5.3 Substitution of tone markers

Only two spelling errors are substitution of tone markers: *<กว้าง> for <กว้าง> /kwā:ŋ/ ‘widely’ and *<แม้แต่> for <แม้แต่> /mɛ:tɛ:/ ‘even’.

5.1.6 Other spelling errors

Another ten misspelled words were also found but they cannot be grouped into the types presented above. Therefore, they are listed separately in Table 5-26.

Table 5-26 Other irregular spelling errors made by Chinese students

Misspelled words	Correct words	Meaning
*พาเชิญ, *พะเชิญ	เผชิญ /p ^h atɕ ^h :n/	confront
*เสน่ห์	เสน่ห์ /sənè:/	charm
*เคย	เคย /k ^h :j/	once
*วัฒนธรรม, *วัฒนธรรม	วัฒนธรรม /wát ^h ánát ^h am/	culture
*อยู่	อยู่ /jù:/	exist
*ก็	ก็ /kú:/	also
*ศัพท์	ศัพท์ /sàp/	vocabulary
*เก็บ	เก็บ /kèp/	keep

5.2 Patterns of spelling errors made by Lao students

Totally, 1679 spelling errors were found among the thirty Lao participants. Table 5-27 shows the patterns of those spelling errors which were classified by the phonological features. The spelling errors in initial consonant letters are the most common errors, which account for 34.7 percent of all the spelling errors. Final consonants and vowels seem to be equal in difficulty for Lao students, which occupy 24.4 percent and 23.6 percent respectively. Spelling errors in unpronounced letters hold another 12.7

percent. Comparatively, the errors in tone markers are much more infrequent and 57 of them were found among twenty-five Lao students. Another six spelling errors are displayed separately.

Table 5-27 Patterns of spelling errors made by Lao students classified by the phonological features

Patterns of spelling errors	Frequency	Percentage	Participants
Initial consonants	601	35.8%	30
Final consonants	408	24.3%	30
Vowels	395	23.6%	30
Unpronounced letters	212	12.6%	30
Tone markers	57	3.4%	25
Others	6	0.3%	5
Total	1679	100.0%	30

5.2.1 Lao students' spelling errors in initial consonant letters

In total, 601 spelling errors are identified to be the spelling errors in initial consonant letters. All the thirty Lao students misspelled the initial consonants more or less, which reflects that initial consonants are the toughest challenge for Lao students when spelling Thai. Based on the reconstruction of the misspelled words, the 601 spelling errors in initial consonants were further categorized into substitution, insertion, and omission.

Table 5-28 Spelling errors in initial consonant letters made by Lao students classified by initial consonant letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	402	66.9%	30
Insertion	112	18.6%	21
Omission	87	14.5%	21
Total	601	100.0%	30

5.2.1.1 Substitution of initial consonant letters

As shown in Table 5-28, most of the spelling errors in initial consonant letters are substitution. According to the spelling errors found, Lao students have problems in spelling the initial consonants with the same pronunciation or those with different pronunciation.

Firstly, the homophonic initial consonant letters in Thai words were massively substituted by Lao students. As discussed earlier, some initial consonant phonemes in

Thai can be represented by several different graphemes. Lao students made a large number of spelling errors when choosing the correct initial consonant letter for syllables. Table 5-29 displays some examples, which proves that the all /s/, /d/, /t/, /k^h/, /p^h/, /j/, and /n/ sounds appear to be fallible points for Lao students. It is notable that Lao students not only used the most common letters for those sounds, but they also used relatively rare representations of sounds, such as *<ลำไส้> for <ลำไส้> /lamsâj/ ‘intestine’ and *<สนาม> for <สนาม> /sànǎ:m/ ‘yard’, which reflect that they have realized that one sound in Thai could be represented by several different letters; however, they still failed to choose the correct representation for many initial consonant letters.

Table 5-29 Examples of spelling errors made by Lao students caused by substituting one initial consonant letter with another representing a homophonic sound

Initial consonant letters	Misspelled words	Correct words	Meaning
<ศ> /s/ → <ส> /s/	*อาศัย /ʔa:sâj/	อาศัย /ʔa:sâj/	habitat
<ส> /s/ → <ศ> /s/	*ลำไส้ /lamsâj/	ลำไส้ /lamsâj/	intestine
<ช> /s/ → <ศ> /s/	*โคสนา /k ^h ò:tsàna:/	โฆษณา /k ^h ò:tsàna:/	advertisement
<ช> /s/ → <ส> /s/	*โฆษนา /k ^h ò:tsàna:/	โฆษณา /k ^h ò:tsàna:/	advertisement
<ณ> /n/ → <น> /n/	*กรุณา /kàrúna:/	กรุณา /kàrúna:/	please
<น> /n/ → <ณ> /n/	*สนาม /sànǎ:m/	สนาม /sànǎ:m/	yard
<ญ> /j/ → <ย> /j/	*อนุญาต /ʔànújât/	อนุญาต /ʔànújât/	allow
<ท> /t ^h / → <ธ> /t ^h /	*อาทิ /ʔa:t ^h i/	อาทิ /ʔa:t ^h i/	such as
<ธ> /t ^h / → <ท> /t ^h /	*ประชาธิปไตย /pràt ^h ai:pàtaj/	ประชาธิปไตย /pràt ^h ai:pàtaj/	democracy
<ภ> /p ^h / → <พ> /p ^h /	*ภูเขา /p ^h u:k ^h âu/	ภูเขา /p ^h u:k ^h âu/	mountain
<ช> /s/ → <ทร> /s/	*แทรกแซง /sɛ:kse:ŋ/	แทรกแซง /sɛ:kse:ŋ/	intervene
<ฆ> /k ^h / → <ค> /k ^h /	*โคสนา /k ^h ò:tsàna:/	โฆษณา /k ^h ò:tsàna:/	advertisement
<ฎ> /t/ → <ต> /t/	*ปฏิเสธ /pàtisè:t/	ปฏิเสธ /pàtisè:t/	refuse
<ฎ> /d/ → <ด> /d/	*กรกฎาคม /kàràkàda:k ^h om/	กรกฎาคม /kàràkàda:k ^h om/	July
<ฐ> /t ^h / → <ถ> /t ^h /	*พื้นฐาน /p ^h u:nt ^h ǎ:n/	พื้นฐาน /p ^h u:nt ^h ǎ:n/	base

In addition, some initial consonant letters with different pronunciation were also substituted by Lao students. Roughly speaking, these spelling errors can be

summarized into four groups; namely, 1) low-class and high-class initial consonant letters; 2) <ร> /r/ and <ล> /l/; 3) graphic representations of /s/ sound and /t^h/ sound; 4) other initial consonant letters. The first group is that Lao students blended paired low-class and high-class initial consonant letters, some errors are listed in Table 5-30.

Table 5-30 Examples of spelling errors made by Lao students caused by substituting high-class for low-class initial consonants

Initial consonant letters	Misspelled words	Correct words	Meaning
<ฟ> /f/ → <ฝ> /f/	*แน่นแฟ้น /nɛ:nfɛ:n/	แน่นแฟ้น /nɛ:nfɛ:n/	firm
<ช> /t ^h / → <ฉ> /t ^h /	*ชายแดน /t ^h ajdɛ:n/	ชายแดน /t ^h ajdɛ:n/	frontier
<ค> /k ^h / → <ข> /k ^h /	*ค่อนข้าง /k ^h ɔ:nk ^h aj/	ค่อนข้าง /k ^h ɔ:nk ^h aj/	rather

The next group is that Lao students substituted <ร> /r/ for <ล> /l/ and vice versa. Some examples are shown in Table 5-31.

Table 5-31 Examples of spelling errors made by Lao students caused by substituting <ร> /r/ for <ล> /l/ and vice versa

Initial consonant letters	Misspelled words	Correct words	Meaning
<ล> /l/ → <ร> /r/	*เมืองหลวง /mɛ:nrɔ:ŋ/	เมืองหลวง /mɛ:nlɔ:ŋ/	capital
	*ลำไส้ /ramsaj/	ลำไส้ /lamsaj/	intestine
<ร> /r/ → <ล> /l/	*บริการ /bɔ:lɪka:n/	บริการ /bɔ:rɪka:n/	service
	*เท่าไร /t ^h ajraj/	เท่าไร /t ^h auraj/	how much

Then, the graphic representations of /s/ sound and /t^h/ sound seem to be another weak point for Lao students. They either substituted /t^h/ sound for /s/ sound or substituted /s/ sound for /t^h/ sound, as shown in Table 5-32.

Table 5-32 Examples of spelling errors made by Lao students caused by substituting /t^h/ for /s/ sound and vice versa

Initial consonant letters	Misspelled words	Correct words	Meaning
<ส> /s/ → <ซ> /t ^h /	*สดชื่น /t ^h ɔttɛ ^h ɯ:n/	สดชื่น /sɔttɛ ^h ɯ:n/	to be fresh
<ซ> /s/ → <ซ> /t ^h /	*มอเตอร์ไซด์ /mɔ:tr:t ^h aj/	มอเตอร์ไซด์ /mɔ:tr:saj/	motorcycle
<ซ> /t ^h / → <ซ> /s/	*ชอบ /sɔ:p/	ชอบ /t ^h ɔ:p/	like
<ฉ> /t ^h / → <ส> /s/	*เฉพาะ /səp ^h aj/	เฉพาะ /t ^h əp ^h aj/	specifically

Finally, Lao students also substituted the initial consonants with other incorrect ones as can be seen from Table 5-33.

Table 5-33 Examples of spelling errors made by Lao students caused by substituting initial consonants with other incorrect ones

Initial consonant letters	Misspelled words	Correct words	Meaning
<พ> /p ^h / → <ป> /p/	*ปะเซิน	เผชิญ /p ^h atɕ ^h :n/	confront
<น> /n/ → <ม> /m/	*ม้ก	น้ก /nák/	extremely
<ค> /k ^h / → <ศ> /s/	*นศร	นคร /nák ^h :n/	city
<ด> /d/ → <ด> /k ^h /	*คั้งน้	ดั่งน้ /daŋnán/	therefore

5.2.1.2 Insertion of initial consonant letters

Besides substitution, Lao students also inserted needless initial consonant letters in their spelling. According to the errors committed by them, they totally inserted four types of consonant letters, including leading consonant <อ> /ʔ/, leading consonant <ห> /h/, <ร> /r/ in false consonant clusters, or <ร> /r/ in true consonant clusters as illustrated in Table 5-34.

Table 5-34 Examples of spelling errors made by Lao students caused by inserting initial consonant letters

Inserted consonant letters	Misspelled words	Correct words	Meaning
leading consonant <อ> /ʔ/	*อัยยัง	ยัง /jan/	still
leading consonant <ห> /h/	*ขหนม	ขนม /k ^h anóm/	sweets
<ร> /r/ in false clusters	*เศร้าเศรค	เศร้าเศค /sáusò:k/	depressed
<ร> /r/ in true clusters	*องกราน	องค์การ /ʔoŋka:n/	organization

5.2.1.3 Omission of initial consonant letters

The spelling errors in omission hold a relatively lower percentage of all the spelling errors in initial consonant letters. In addition, the errors in omission are not diverse as those in substitution and insertion. There are two situations that Lao students were likely to omit the initial consonant letters in the words: 1) the second consonant letter of true clusters; 2) the unpronounced /r/ <r> in the false consonant cluster <สร> /s/, <ศร> /s/, or <จร> /tɕ/.

Table 5-35 Examples of spelling errors made by Lao students caused by omitting the second consonant letter of clusters

Omitted consonant letters	Misspelled words	Correct words	Meaning
<ล> /l/ in cluster <ปล> /pl/	*แลกเปลี่ยน /lɛ:kpian/	แลกเปลี่ยน /lɛ:kplian/	exchange
<ร> /r/ in cluster <ปร> /pr/	*ปรับ /pàppun/	ปรับ /pràppun/	adjust
<ล> /l/ in cluster <คล> /kl/	*คล้าย /k ^h à:j/	คล้าย /k ^h láj/	resemble
<ล> /l/ in cluster <กล> /gl/	*ทาง /ka:ŋ/	กลาง /kla:ŋ/	middle
<ร> /r/ in cluster <ศร> /s/	*เศร้าโศก /sâusò:k/	เศร้าโศก /sâusò:k/	depressed
<ร> /r/ in cluster <สร> /s/	*สร้าง /sâ:ŋ/	สร้าง /sâ:ŋ/	build
<ร> /r/ in cluster <จร> /tɕ/	*จริง /tɕiŋ/	จริง /tɕiŋ/	real

5.2.2 Lao students' spelling errors in final consonant letters

According to Table 5-36, 98.5 percent of the spelling errors in final consonants are substitution and all the thirty Lao students made spelling errors in final consonant substitution. Compared to substitution, the spelling errors in omission and insertion are rarely seen and the students who made the errors are also relatively fewer.

Table 5-36 Spelling errors in final consonant letters made by Lao students classified by how final consonant letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	404	99.1%	30
Omission	3	0.7%	3
Insertion	1	0.2%	1
Total	408	100.0%	30

5.2.2.1 Substitution of final consonant letters

Based on the spelling errors found among Lao students, they have big difficulty in choosing the multiple graphic representations of final consonant phonemes /t/, /p/, /k/, and /n/. Table 5-37 provides the examples of each pattern. When Lao students spelled Thai words with final consonant phonemes /t/, /n/, /p/, /k/, they tended to simplify the /t/ into <ต> /t/, /n/ into <น> /n/, /p/ into <บ> /p/, and /k/ into <ก> /k/, which reflects that the various options in final consonant letters were ignored by Lao students.

Table 5-37 Examples of spelling errors made by Lao students caused by substituting one final consonant letter with another representing a homophonic sound

Final consonants letters	Misspelled words	Correct words	Meaning
<ต>/t/ → <ด> /t/	*ประเทศ /prət ^h è:t/	ประเทศ /prət ^h è:t/	country
<ฎ> /t/ → <ด> /t/	*กฎหมาย /kòtmǎ:j/	กฎหมาย /kòtmǎ:j/	law
<ช> /t/ → <ด> /t/	*ประโยชน์ /pràjò:t/	ประโยชน์ /pràjò:t/	benefit
<ต> /t/ → <ด> /t/	*สังเกต /sǎŋkè:t/	สังเกต /sǎŋkè:t/	observe
<ส> /t/ → <ด> /t/	*โอกาส /ʋo:kà:t/	โอกาส /ʋo:kà:t/	chance
<ท> /t/ → <ด> /t/	*บทบาท /bòtbà:t/	บทบาท /bòtbà:t/	role
<ล>/n/ → <น> /n/	*กงสุล /kongsün/	กงสุล /kongsün/	consul
<ร>/n/ → <น> /n/	*ประสบการณ์ /pràsòpka:n/	ประสบการณ์ /pràsòpka:n/	experience
<ณ>/n/ → <น> /n/	*ผลิตภัณฑ์ /p ^h àlitàp ^h an/	ผลิตภัณฑ์ /p ^h àlitàp ^h an/	product
<ร>/n/ → <น> /n/	*บริการ /bò:rika:n/	บริการ /bò:rika:n/	service
<น>/n/ → <ร> /n/	*ทรมาน /t ^h o:ràma:n/	ทรมาน /t ^h o:ràma:n/	torture
<ร>/n/ → <น> /n/	*ต้องการ /tò:ŋka:n/	ต้องการ /tò:ŋka:n/	require
<ล>/n/ → <น> /n/	*รางวัล /ra:ŋwan/	รางวัล /ra:ŋwan/	prize
<ป>/p/ → <บ> /p/	*ทวีป /t ^h áwí:p/	ทวีป /t ^h áwí:p/	continent
<พ> /p/ → <บ> /p/	*สุขภาพ /sùkk ^h àp ^h á:p/	สุขภาพ /sùkk ^h àp ^h á:p/	health
<ค>/k/ → <ก> /k/	*สามัคคี /sǎmákk ^h i:/	สามัคคี /sǎmákk ^h i:/	harmony
<ช> /k/ → <ก> /k/	*สุข /sùk/	สุข /sùk/	happiness

5.2.2.2 Omission of final consonant letters

Three spelling errors in omission of final consonant letters were found. Two of them are the spelling errors in the word <ปัจจุบัน> /pàttçùban/ ‘at present’, two Lao students misspelled it into *<ปะจุบัน> and *<ปัจจุบัน>, in which the final consonant <จ> was omitted. Another error is *<อุตสาหกรรม> for <อุตสาหกรรม> /ʋùtsǎ:hàkam/ ‘industry’.

5.2.2.3 Insertion of final consonant letters

Only one spelling error was the insertion of final consonant letters. In the misspelled word *<บรรณเทา>, the writer was not clear that the syllable <รร> /an/ already includes a final consonant /n/ so that she inserted another redundant <ณ> /n/ in the word <บรรเทา> /bant^hau/ ‘relieve’.

5.2.3 Lao students’ spelling errors in vowel letters

Table 5-38 presents the patterns and frequency of the spelling errors made by Lao students in vowel letters. Four patterns of the spelling errors in vowel letters were found; namely, insertion, substitution, omission, and misplacement.

Table 5-38 Spelling errors in vowel letters made by Lao students classified by how vowel letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Insertion	219	55.4%	30
Substitution	155	39.2%	30
Omission	16	4.1%	16
Misplacement	5	1.3%	5
Total	395	100.0%	30

5.2.3.1 Insertion of vowel letters

As illustrated in Table 5-38, insertion are the most frequent spelling errors in vowel letters made by Lao students and more than half of the errors in vowels are classified into insertion. Among the 219 errors in insertion of vowel letters, two vowel letters were intruded by Lao students. The first one is the short vowel <๕> /a/; the second one is the unwritten but pronounced <อ> /ɔ:/ in some words, which can be seen from Table 5-39.

Table 5-39 Examples of spelling errors made by Lao students caused by inserting vowel letters

Inserted vowels	Misspelled words	Correct words	Meaning
<๕> /a/	*สถานที่ /sàt ^h á:nt ^h i:/	สถานที่ /sàt ^h á:nt ^h i:/	place
	*ขนม /k ^h ánǒm/	ขนม /k ^h ánǒm/	sweets
	*เอกลักษณ์ /ʔè:kkálák/	เอกลักษณ์ /ʔè:kkálák/	identity
	*นคร /nák ^h ɔ:n/	นคร /nák ^h ɔ:n/	city
	*สนาม /sànǎ:m/	สนาม /sànǎ:m/	yard
<อ> /ɔ:/	*คณะบดี /k ^h ánáɔ:di:/	คณบดี /k ^h ánáɔ:di:/	dean
	*ทรมาน /t ^h ɔ:rámá:n/	ทรมาน /t ^h ɔ:rámá:n/	torture
	*บริการ /ɔ:ríká:n/	บริการ /ɔ:ríká:n/	service

5.2.3.2 Substitution of vowel letters

Substitution of vowel letters occupies 38 percent of the spelling errors. The spelling errors in substitution can be divided into three groups: 1) substituting one vowel letter with another representing a homophonic sound; 2) substituting long for short vowels and vice versa; 3) substituting Lao vowel letters for Thai vowel letters.

Among the vowel letters with the same pronunciation, Lao students made many incorrect decisions when encountering /aj/, /am/, and /an/ sounds, which can be represented by several different graphemes.

Table 5-40 Examples of spelling errors made by Lao students caused by substituting one vowel letter with another representing a homophonic sound

Vowel phonemes	Misspelled words	Correct words	Meaning
<ไ-> → <ไ-> /aj/	*หลงไหล /lɔŋlǎj/	หลงไหล /lɔŋlǎj/	to be fascinated
	*รักใคร่ /rákk ^h rāj/	รักใคร่ /rákk ^h rāj/	love
<ัย> → <ไ-> /aj/	*ชัยชนะ /tɕ ^h ajtɕ ^h áná/	ชัยชนะ /tɕ ^h ajtɕ ^h áná/	victory
	*อาศัย /ʔa:sāj/	อาศัย /ʔa:sāj/	habitat
<ไ-> → <ัย> /aj/	*กำไร /kamlaj/	กำไร /kamraj/	profit
<-รร> → <ัน> /an/	*สร้างสันต์ /sà:ŋsán/	สร้างสรรค์ /sà:ŋsán/	create
	*ไม้บันทัด /májbant ^h át/	ไม้บรรทัด /májbant ^h át/	ruler
	*บันดา /banda:/	บรรดา /banda:/	all
<ัน> → <-รร> /an/	*ผลิตภัณฑ์ /p ^h alittàp ^h an/	ผลิตภัณฑ์ /p ^h alittàp ^h an/	product
<-รร> → <ำ> /am/	*ท่ามะชาด /t ^h ammátɕ ^h à:t/	ธรรมชาติ /t ^h ammátɕ ^h à:t/	nature
<ัม> → <ำ> /am/	*สัมพันธ์ /sǎmp ^h an/	สัมพันธ์ /sǎmp ^h an/	relations

Besides the vowels with identical pronunciation, Lao students also substituted long for short vowels and vice versa. It can be seen from the examples in Table 5-41, Lao students substituted <็> /i/ for <ี> /i/ or <ื> /u/ for <ู> /u/ and vice versa.

Table 5-41 Examples of spelling errors made by Lao students caused by substituting long for short vowels and vice versa

Vowel letters	Misspelled words	Correct words	Meaning
<็> /i/ → <ี> /i/	*อินโดจีน /ʔi:indo:tɕi:n/	อินโดจีน /ʔindo:tɕi:n/	Indochina
<ี> /i/ → <็> /i/	*อีก /ʔik/	อีก /ʔi:k/	again
<ื> /u/ → <ู> /u/	*ซึ่ง /su:ŋ/	ซึ่ง /súŋ/	which
<ู> /u/ → <ื> /u/	*เครื่องมือ /k ^h úŋɔŋmu:/	เครื่องมือ /k ^h úŋɔŋmu:/	tool

Finally, Lao students also substituted Thai vowels with Lao vowels. They substituted <็> /i:/, <็> /i/ with <็> /i:/, <็> /i/ or <ื> /u:/, <ื> /u/ with <็> /u:/, <็> /u/, the errors like *<เล็ก> for <เล็ก> /lék/ 'small' are also found in Lao students' written works. Some examples are provided in Table 5-42.

Table 5-42 Examples of spelling errors made by Lao students caused by substituting Lao vowel letters for Thai vowel letters

Vowel letters	Misspelled words	Correct words	Meaning
<อื> /i:/ → <อึ> /i:/	*ที่	ที่ /t ^h i:/	at
	*เคียด	เคียด /k ^h riat/	worried
<อึ> /ɪ/ → <อื> /ɪ/	*ติด	ติด /tit/	next to
	*ผลิตภัณฑ์	ผลิตภัณฑ์ /p ^h alittap ^h an/	product
<อึ> /w:/ → <อื> /w:/	*พื้น	พื้น /p ^h u:n/	floor
	*คือ	คือ /k ^h w:/	be
<อึ> /w:/ → <อื> /w:/	*ซึ่ง	ซึ่ง /s ^h wɯŋ/	which
	*รู้สึก	รู้สึก /rú:s ^h u:k/	feel
<เอื้อ> /e/ → <เอือ> /e/	*เป็น	เป็น /pen/	be
	*เล็ก	เล็ก /lék/	small
<เ-า> /au/ → <เ-ำ> /au/	*งูเห่า	งูเห่า /ŋu:hau/	cobra
<อ> /ɔ:/ → <อ๋> /ɔ:/	*มอเตอร์ไซค์	มอเตอร์ไซค์ /mɔ:tɔ:saj/	motorcycle
<เ-ย> /ɤ:j/ → <เอ็ย> /ɤ:j/	*เคย	เคย /k ^h ɤ:j/	ever
<เอ็ย> /ia/ → <เ-ย> /ia/	*เบย	เบียร์ /bia/	beer

5.2.3.3 Omission of vowel letters

Totally, sixteen errors in omission of vowel letters were found and they were made by sixteen Lao students. It can be seen from Table 5-43 that Lao students were either likely to omit a long vowel letter or a short one.

Table 5-43 Examples of spelling errors made by Lao students caused by omitting vowel letters

Omitted vowel letters	Misspelled words	Correct words	Meaning
<-ะ> /a/	*สะดวกสบาย	สะดวกสบาย /sàduksàba:j/	convenient
<-า> /a:/	*สามัคคี	สามัคคี /sǎ:mákk ^h i:/	harmony
<ุ> /u:/	*ผูกพัน	ผูกพัน /p ^h u:kp ^h an/	commit

5.2.3.4 Misplacement of vowel letters

As mentioned before, misplacement in vowel letters means that students put the vowel letters in incorrect place. This pattern of spelling errors was made by five Lao students. Additionally, Lao students made such spelling errors only when they encountered the initial consonant clusters spelled with a superscript vowel letter.

Table 5-44 Examples of spelling errors made by Lao students caused by misplacing vowel letters

Misplaced vowel letters	Misspelled words	Correct words	Meaning
<๖> /i:/	*เคีรยด	เคีรยด /k ^h riat/	worried
<๖> /u:/	*เคีรยงมือ	เคีรยงมือ /k ^h ruŋamw:/	tool
<๖> /a/	*ทรัพย์สิน	ทรัพย์สิน /sápsin/	asset
<๖> /i/	*เผชิญ	เผชิญ /p ^h at ^h ɕ:n/	confront

5.2.4 Lao students' spelling errors in unpronounced letters

As shown in Table 5-45, a predominant percentage of the spelling errors in unpronounced letters fall into omission. Insertion and substitution have a relatively close percentage, which occupy 17.0 percent and 15.1 percent respectively.

Table 5-45 Spelling errors in unpronounced letters made by Lao students classified by how unpronounced letters were misspelled

Patterns of Spelling Errors	Frequency	Percentage	Participants
Omission	144	67.9%	26
Insertion	36	17.0%	19
Substitution	32	15.1%	17
Total	212	100.0%	30

5.2.4.1 Omission of unpronounced letters

As shown in Table 5-46, either the marked unpronounced consonant letters or the unmarked consonant and vowel letters could be omitted by Lao students.

Table 5-46 Examples of spelling errors made by Lao students caused by omitting unpronounced letters

Omitted unpronounced letters	Misspelled word	Correct word	Meaning
<ທ>	*ศัพ /sàp/	ศัพท /sàp/	vocabulary
<ຣ> <ັ>	*มอเตอร์ไซ /mɔ:tɕ:saj/	มอเตอร์ไซด์ /mɔ:tɕ:saj/	motorcycle
<ັ>	*องกร /ʋɔŋkɔ:n/	องค์กร /ʋɔŋkɔ:n/	organization
<ຣ>	*สามาถ /sà:mà:t/	สามารถ /sà:mà:t/	can
<ຣ>	*มิตร /mit/	มิตร /mit/	friend
<ື>	*อนุมัติ /ʋànúmát/	อนุมัติ /ʋànúmát/	approve
<ຸ>	*ธาตุ /t ^h à:t/	ธาตุ /t ^h à:t/	element

5.2.4.2 Insertion of unpronounced letters

The insertion of unnecessary unpronounced letters in Thai words was also found. The inserted elements could be a marked unpronounced consonant, an unmarked unpronounced vowel, or a sound-killing marker as seen below.

Table 5-47 Examples of spelling errors made by Lao students caused by inserting unpronounced letters

Inserted unpronounced letters	Misspelled words	Correct words	Meaning
<ร้>	*กตหมายร์ /kòtmǎj/	กฎหมาย /kòtmǎj/	law
<ณ>	*งบประมาณร์ /ŋóppràma:n/	งบประมาณ /ŋóppràma:n/	budget
<ดู>	*สังเกตู /sǎŋkè:t/	สังเกต /sǎŋkè:t/	observe
<อ>	*อนุญาตู /ʔànújà:t/	อนุญาต /ʔànújà:t/	allow
<อ>	*กิโลเมต์ /kilo:me:/	กิโลเมตร /kilo:mét/	kilometer

5.2.4.3 Substitution of unpronounced letters

The substitution of unpronounced letters is only found in marked unpronounced consonant letters as illustrated in the following several examples.

Table 5-48 Examples of spelling errors made by Lao students caused by substituting unpronounced consonant letters with other incorrect ones

Misspelled words	Correct words	Meaning
*ศัพท์ /sàp/	ศัพท์ /sàp/	vocabulary
*สร้างสรรณ /sâ:ŋsǎn/	สร้างสรรค /sâ:ŋsǎn/	create
*มอเตอร์ไซด์ /mɔ:tɕ:saj/	มอเตอร์ไซด์ /mɔ:tɕ:saj/	motorcycle

5.2.5 Lao students' spelling errors in tone markers

The spelling errors in tone markers are much rarer among Lao students; however, all the thirty students made at least one error in tone marker, which reflects that Lao students are not fully competent to the Thai tone system.

Table 5-49 Spelling errors in tone markers made by Lao students classified by how tone markers were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Insertion	29	50.9%	24
Misplacement	14	24.6%	12
Substitution	8	14.0%	8
Omission	6	10.5%	5
Total	57	100.0%	30

5.2.5.1 Insertion of tone markers

The most common spelling errors in tone markers are insertion. Either a low tone marker or a falling tone marker was likely to be inserted by Lao students.

Table 5-50 Examples of spelling errors made by Lao students caused by inserting tone markers

Inserted tone markers	Misspelled words	Correct words	Meaning
<◌̀>	*ดั่งนั้น /dǎŋnán/	ดั่งนั้น /dǎŋnán/	therefore
<◌̎>	*เศร้าโศก /sǎusò:k/	เศร้าโศก /sǎusò:k/	depressed
<◌̋>	*ประตู /pràtù:/	ประตู /pràtù:/	door

5.2.5.2 Misplacement of tone markers

Misplacement of tone markers refers that the students put the tone marker in the incorrect position. The same as the misplacement in vowel letters, the misplacement of tone markers can be seen only in the consonant clusters. Some tone markers were put in the wrong position together with the superscript vowel letters.

Table 5-51 Examples of spelling errors made by Lao students caused by misplacing tone markers

Misspelled words	Correct words	Meaning
*แหล่ง	แหล่ง /lɛːŋ/	source
*สร้างสรรค์	สร้างสรรค์ /sǎːŋsǎn/	create
*เศร้าโศก	เศร้าโศก /sǎusò:k/	depressed
*เครียด	เครียด /kʰriat/	worried
*เครื่องมือ	เครื่องมือ /kʰuŋŋmɯː/	tool

5.2.5.3 Substitution of tone markers

Lao students have big problems in using low tone marker and falling tone marker, they misspelled low tone marker into falling tone marker.

Table 5-52 Examples of spelling errors made by Lao students caused by substituting tone markers with other incorrect ones

Misspelled words	Correct words	Meaning
*คล่องแคล่ว /kʰlɔːŋkʰlɛːw/	คล่องแคล่ว /kʰlɔːŋkʰlɛːu/	quickly
*เนิ่นนาน /nɛːnna:n/	เนิ่นนาน /nɛːnna:n/	long time
*แน่นแฟ้น /nɛːnfɛːn/	แน่นแฟ้น /nɛːnfɛːn/	firmly
*โดดเด่น /tò:ttɛːn/	โดดเด่น /tò:ttɛːn/	outstanding
*ไม่ /máj/	ไม่ /máj/	not

5.2.5.4 Omission of tone markers

Some Lao students also omitted the tone markers in the words as shown in Table 5-53, either the low tone marker or falling tone marker.

Table 5-53 Examples of spelling errors made by Lao students caused by omitting tone markers

Omitted tone markers	Misspelled words	Correct words	Meaning
<◌◌>	*เครื่องมือ /k ^h rwaŋmú:/	เครื่องมือ /k ^h rúwaŋmu:/	tool
<◌◌>	*หนึ่ง /nwn/	หนึ่ง /núwŋ/	one
<◌◌>	*ทั้ง /t ^h ŋ/	ทั้ง /t ^h áŋ/	whole

5.2.5 Others

Another six spelling errors made by five Lao students cannot be classified into the patterns introduced above; therefore, they are discussed separately, as shown in Table 5-54. The misspelled words *<พะเชิญ> and *<สะแดง> were repeated twice respectively.

Table 5-54 Other irregular spelling errors made by Lao students

Misspelled words	Correct words	Meaning
*สะเพาะ /sàp ^h ɔ:/	เฉพาะ /t ^h ɔ̀ap ^h ɔ:/	specifically
*พะเชิญ /p ^h atɕ ^h ɔ:n/	เผชิญ /p ^h atɕ ^h ɔ:n/	confront
*สะแดง /sàdɛ:ŋ/	แสดง /sàdɛ:ŋ/	show
*สะเสนอ /sànsɔ:/	เสนอ /sànsɔ:/	propose

5.3 Pattern of spelling errors made by Thai students

In total, 151 spelling errors were found among Thai students. As shown in Table 5-55, initial consonant letters are the most difficult part for Thai students, which account for about 31.8 percent. Final consonant letters and vowel letters are equally difficult, occupying approximately the same percentage. Additionally, another 13.9 percent were the errors in the unpronounced letters in Thai. Comparatively, Thai students made the fewest errors in tone markers, representing 4.6 percent of all the errors.

Table 5-55 Patterns of spelling errors made by Thai students classified by the phonological features

Patterns of spelling errors	Frequency	Percentage	Participants
Initial consonants	48	31.8%	24
Final consonants	38	25.2%	20
Vowels	37	24.5%	19
Unpronounced letters	21	13.9%	17
Tone markers	7	4.6%	5
Total	151	100.0%	30

5.3.1 Thai students' spelling errors in initial consonant letters

Forty-eight spelling errors were identified as the errors in initial consonant letters. Forty-seven of them are substitution and one spelling error is insertion. Omission of initial consonant letters was not found.

5.3.1.1 Substitution of initial consonant letters

Thai students made many incorrect choices among some homophonic consonant letters, such as <ส> /s/ and <ศ> /s/, <ทร> /s/ and <ซ> /s/, <น> /n/ and <ณ> /n/, or <ค> /k^h/ and <ข> /k^h/. Moreover, Thai students also substituted voiced for voiceless consonants and vice versa. Finally, the paired high-class and low-class consonants are misspelled by Thai students as well. Table 5-56 displays some examples.

Table 5-56 Examples of spelling errors made by Thai caused by substituting one initial consonant letter with another incorrect one

Initial consonant letters	Misspelled words	Correct words	Meaning
<ส> /s/ → <ศ> /s/	*กงศุล /kɔŋsŭn/	กงสุล /kɔŋsŭn/	consul
<ซ> /s/ → <ทร> /s/	*แทรกแทรก /sɛ:kse:ŋ/	แทรกแซง /sɛ:kse:ŋ/	intervene
<น> /n/ → <ณ> /n/	*ประณีประนอม /pràni:pràno:m/	ประนีประนอม /pràni:pràno:m/	compromising
<ณ> /n/ → <น> /n/	*โฆษณา /k ^h ò:ksàna:/	โฆษณา /k ^h ò:tsàna:/	advertisement
<บ> /b/ → <ป> /p/	*บกพร่อง /pòkp ^h rò:ŋ/	บกพร่อง /bòkp ^h rò:ŋ/	defect
<ฎ> /t/ → <ฏ> /d/	*ปฏิเสธ /pàdisè:t/	ปฏิเสธ /pàtisè:t/	refuse
<ฟ> /f/ → <ฝ> /f/	*แน่นแฟ้น /nɛ:nfɛ:n/	แน่นแฟ้น /nɛ:nfɛ:n/	firmly
<ฟ> /f/ → <ฝ> /f/	*ฟุตบอล /fútbo:n/	ฟุตบอล /fútbo:n/	football
<ผ> /p ^h / → <พ> /p ^h /	*เผชิญ /p ^h àtɕ ^h :n/	เผชิญ /p ^h àtɕ ^h :n/	confront

5.3.1.2 Insertion of initial consonant letters

One error is the insertion of initial consonant letters, *<กระทันหัน> for <กะทันหัน> /kàt^hanhăn/ ‘suddenly’. The Thai student inserted a redundant <ร>, which manufactured a true cluster for the original word.

5.3.2 Thai students’ spelling errors in final consonant letters

All the 38 spelling errors in final consonant letters are substitution. More than one option of final consonant phonemes /t/, /n/, and /k/ causes most of the substitution. At the same time, other substitution was also found.

Table 5-57 Examples of spelling errors made by Thai caused by substituting a final consonant letter with another incorrect one

Final consonant letters	Misspelled words	Correct words	Meaning
<ส>/t/ → <ศ>/t/	*โอกาส /ʋo:kà:t/	โอกาส /ʋo:kà:t/	chance
<ฎ>/t/ → <ฏ> /t/	*กฎหมาย /kòtmă:j/	กฎหมาย /kòtmă:j/	law
<น> /n/ → <ณ> /n/	*ทรมาน /t ^h o:râma:n/	ทรมาน /t ^h o:râma:n/	torture
<ค> /k/ → <ก> /k/	*สามัคคี /sămăkk ^h i:/	สามัคคี /sămăkk ^h i:/	harmony
<ก> /k/ → <ง> /ŋ/	*ตะวันออก ¹⁴ /tăwanʋo:ŋ/	ตะวันออก /tăwanʋo:k/	east

5.3.3 Thai students’ spelling errors in vowel letters

Most of the spelling errors in vowels letters are substitution and insertion, which account for 51.4 percent and 43.2 percent of total errors respectively. Only two errors made by one Thai student were found as omission in vowel letters.

Table 5-58 Spelling errors in vowel letters made by Thai students classified by how vowel letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Substitution	19	51.4%	13
Insertion	16	43.2%	14
Omission	2	5.4%	1
Total	37	100.0%	19

5.3.3.1 Substitution of vowel letters

¹⁴ This is the only one example showing substitution of <ง> /ŋ/ for <ก> /k/. It may be caused by the similarity between the two velar sounds: /k/ and /ŋ/, which makes it very possible to replace one for the other. However, more examples are needed to conclude in such a way.

Two groups of substitution of vowel letters were found: 1) multiple graphic representations of /aj/ sound; 2) substituting <ััน> /an/ for <รร> /an/. Some examples are listed in Table 5-59.

Table 5-59 Examples of spelling errors made by Thai caused by substituting one vowel letter with another representing a homophonic sound

Vowel letters	Misspelled words	Correct words	Meaning
<ััย> → <ไย> /aj/	*ไชยชนะ /t ^h ajt ^h áná/	ชัยชนะ /t ^h ajt ^h áná/	victory
<ใ-> → <ไ-> /aj/	*หลงไหล /lǒŋlǎj/	หลงไหล /lǒŋlǎj/	to be fascinated
<ไย> → <ไ-> /aj/	*ผัดไท /p ^h att ^h aj/	ผัดไทย /p ^h att ^h aj/	fried noodles
<ใ-> → <ไ-> /aj/	*ร้องไห้ /rǒ:ŋhǎj/	ร้องไห้ /rǒ:ŋhǎj/	cry
<รร> → <ััน> /an/	*บันเทา /bant ^h au/	บรรเทา /bant ^h au/	relieve
	*สร้างสัน /sà:ŋsǎn/	สร้างสรรค์ /sà:ŋsǎn/	create

5.3.3.2 Insertion of vowel letters

Insertion of vowel letters only appeared in two words: <คณบดี> /k^hánábɔ:di:/ ‘dean’ and <ทรมาน> /t^hɔ:ráma:n/ ‘torture’. Half of the Thai participants inserted a <-ะ> /a/ in the words <คณบดี>, and one student inserted a <-ะ> /a/ in <ทรมาน>.

5.3.3.3 Omission of vowel letters

Two errors in omission of vowel letters were made by two Thai students. One Thai student omitted <-ะ> /a/ in the word <สะดวก> /sàduak/ ‘convenient’ and the other one omitted <ุ> /u/ in <สุขภาพ> /sùkk^hap^há:p/ ‘health’.

5.3.4 Thai students’ spelling errors in unpronounced letters

Nearly half of the errors in unpronounced letters are insertion, which were made by ten Thai students. Omission and substitution account for 33.3 percent and 19.1 percent respectively.

Table 5-60 Spelling errors in unpronounced letters made by Thai students classified by how unpronounced letters were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Insertion	10	47.6%	10
Omission	7	33.3%	6
Substitution	4	19.1%	4
Total	21	100.0%	17

5.3.4.1 Insertion of unpronounced letters

Thai students either inserted a marked unpronounced consonant letter or an unpronounced vowel letter, as shown in Table 5-61.

Table 5-61 Examples of spelling errors made by Thai students caused by inserting unpronounced letters

Inserted letters	Misspelled words	Correct words	Meaning
<ธ>	*ผูกพันธ /p ^h u:kp ^h an/	ผูกพัน /p ^h u:kp ^h an/	commit
<ุ>	*สังเกต /sǎŋkè:t/	สังเกต /sǎŋkè:t/	observe
<ิ>	*อนุญาต /ʔànújà:t/	อนุญาต /ʔànújà:t/	allow

5.3.4.2 Omission of unpronounced letters

Omission of unpronounced letters occurred only when the unpronounced consonant letters have a sound-killing marker, as seen from *<โทรทัศน์> for <โทรทัศน์> /t^ho:rát^hát/ ‘television’, *<มอเตอร์ไซ> for <มอเตอร์ไซด์> /mɔ:tɕ:saj/ ‘motorcycle’, and *<องค์กร> for <องค์กร> /ʔoŋkɔ:n/ ‘organization’, for instance.

5.3.4.3 Substitution of unpronounced letters

The same as omission, substitution in unpronounced letters also only appeared in the marked unpronounced consonant letters. For example, *<มอเตอร์ไซด์> or *<มอเตอร์ไซด์> for <มอเตอร์ไซด์> /mɔ:tɕ:saj/ ‘motorcycle’, *<ผลิตภัณฑ์> for <ผลิตภัณฑ์> /p^halittàp^han/ ‘product’, and *<โทรทัศน์> for <โทรทัศน์> /t^ho:rát^hát/ ‘television’.

5.3.5 Thai students’ spelling errors in tone markers

Seven spelling errors in tone makers were made by five Thai students, including insertion, omission, and substitution.

Table 5-62 Spelling errors in tone markers made by Thai students classified by how tone markers were misspelled

Patterns of spelling errors	Frequency	Percentage	Participants
Insertion	3	42.8%	3
Omission	2	28.6%	2
Substitution	2	28.6%	2
Total	7	100.0%	5

5.3.5.1 Insertion of tone markers

Three errors in insertion of tone markers were found; namely, *<สินค้า> for <สินค้า> /sɪnk^há:/ ‘good’, *<ทรัพย์สิน> for <ทรัพย์สิน> /sápsɪn/ ‘asset’, and *<ทีเดียว> for <ทีเดียว> /t^hi:diəu/ ‘very’.

5.3.5.2 Omission of tone markers

Two errors in omission of tone markers made by two Thai students: *<เครื่องมือ> and <รอยมาลัย>. One omitted low tone marker in <เครื่องมือ> /k^hru̯aŋmw/ ‘tool’, the other omitted falling tone marker in <ร้อยมาลัย> /rɔːjmaːlaj/ ‘string garland’.

5.3.5.3 Substitution of tone markers

Substitution of tone markers was also found: *<จนกระทั่ง> for <จนกระทั่ง> /tɕonkràt^hŋ/ ‘until’ and *<การค้า> for <การค้า> /ka:nk^há/ ‘business’.

5.4 Comparison of patterns of spelling errors made by Chinese and Lao students

In the preceding sections, the patterns of the spelling errors made by Chinese, Lao, and Thai students are presented in detail. The following sections will focus on the comparison between Chinese and Lao students in terms of patterns of spelling errors, including both similarities and differences. Table 5-63 provides the summary of all the patterns of the spelling errors made by Chinese and Lao students compared to Thai students, who are native speakers. If the students made such spelling errors, the corresponding pattern will be marked by “✓”.

Table 5-63 Comparison of patterns of spelling errors made by Chinese, Lao and Thai students

Patterns of Spelling errors			Chinese	Lao	Thai
IC 15	S	substituting initial consonants with other homophonic letters	✓	✓	✓
		substituting voiced for voiceless consonant letters and vice versa	✓		
		substituting <ร> for <ล> and vice versa	✓	✓	
		substituting low for high initial consonants and vice versa	✓	✓	
		substituting /s/ for /t ^h / and vice versa		✓	
		substituting <ล> for <น>	✓		
	O	omitting <ห> /h/ in <หลงไหล>	✓		

¹⁵ Abbreviations of terms: IC=initial consonants, V=vowels, FC=final consonants, U=unpronounced letters, TM=tone markers, S=substitution, O=omission, I=insertion, M=misplacement.

Patterns of Spelling errors		Chinese	Lao	Thai	
			✓		
	I	✓	✓	✓	
			✓		
V	S	✓	✓	✓	
		✓	✓		
		✓			
			✓		
	O	✓	✓		
		✓	✓	✓	
			✓		
	I	✓	✓		
		✓			
		✓	✓	✓	
	M		✓		
	FC	S	✓	✓	✓
			✓		
O		✓			
			✓		
I		✓			
			✓		
U	S	✓	✓	✓	
	O	✓	✓	✓	
		✓	✓	✓	
		✓	✓		

Patterns of Spelling errors			Chinese	Lao	Thai
	I	inserting marked unpronounced consonants	✓	✓	✓
		inserting unpronounced vowels	✓	✓	✓
		inserting sound-killing marker		✓	
TM	S	substituting <◌◌> for <◌◌>	✓		✓
		substituting <◌◌> for <◌◌>		✓	✓
	O	omitting <◌◌> <◌◌>	✓	✓	✓
	I	inserting <◌◌> <◌◌>	✓	✓	✓
		inserting <◌◌>	✓		
	M	Misplacing the tone marker of clusters		✓	

5.4.1 Similarities of patterns of spelling errors shared by Chinese and Lao students

Based on the analysis of the errors found among Chinese and Lao students, there are some similarities shared by them, as presented below:

5.4.1.1 The highest percentage of spelling errors in substitution

On the whole, among the spelling errors made by both Chinese and Lao students, the percentage of substitution is much higher than omission, insertion, and misplacement. As can be seen from Figure 5-1 and 5-2, the substitution holds a predominant percentage among the errors made by both Chinese and Lao students. The same tendency can be found among Thai students as well. As shown in Figure 5-3, substitution also occupies a dominant position among the spelling errors made Thai student.

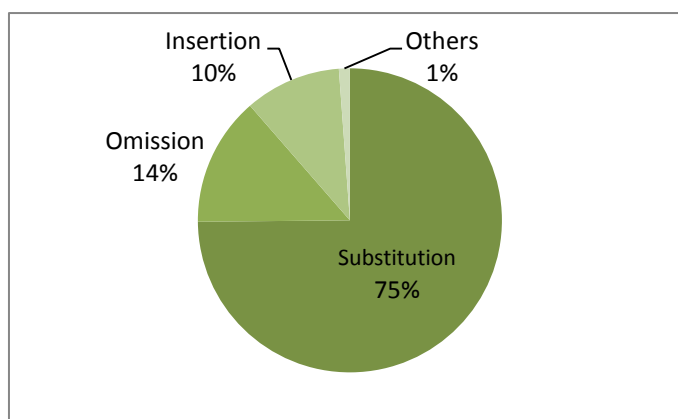


Figure 5-1 Spelling errors made by Chinese students classified according to the misspelled letters

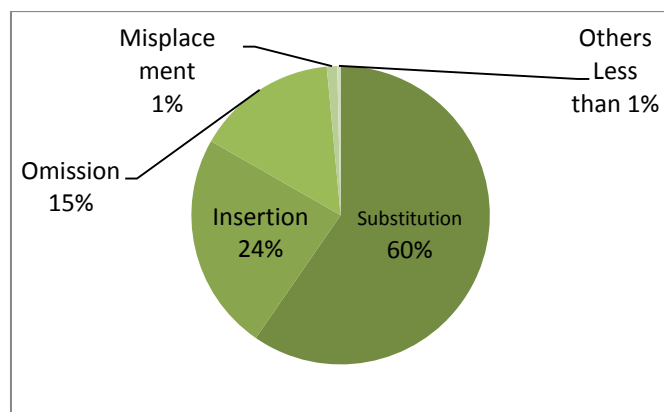


Figure 5-2 Spelling errors made by Lao students classified according to the misspelled letters

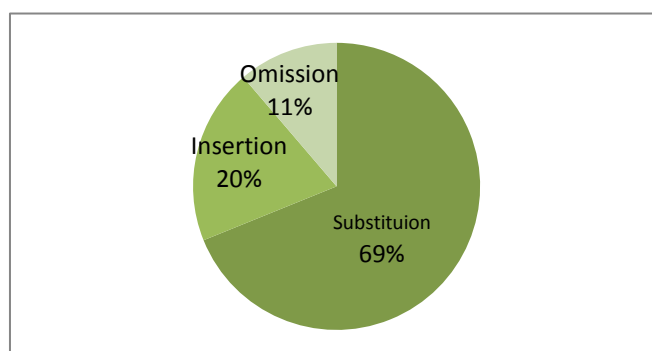


Figure 5-3 Spelling errors made by Thai students classified according to the misspelled letters

5.4.1.2 Similar errors in writing initial consonant letters

It is found that both Chinese and Lao students are confused with initial consonant letters representing homophonic sounds. The spelling errors such as *<ໂສສນາ>, *<ອຸມມັຕີ>, *<ແທຣກແທຣງ>, *<ປຕິເສດ>, *<ກຣກດາຕມ>, and *<ໂສສນາ> were found in both two groups of students' output. This shows that both Chinese and Lao students failed to choose the correct written form of /s/, /n/, /t/, and /d/ sounds. Moreover, both Chinese and Lao students substituted <ລ> /l/ for <ຣ> /r/ and vice versa, *<ເຣີຍນແບບ> for <ເລີຍນແບບ> /lianbè:p/ 'copy' or *<ກຳໄລ> for <ກຳໄຣ> /kamraj/ 'profit' are the errors shared by them. Finally, both Chinese and Lao students misused the paired high-class and low-class initial consonant letters, the errors such as *<ແນ່ນແຟ້ນ> for <ແນ່ນແຟ້ນ> /nɛːnfɛːn/ 'firmly' and *<ພະເຂີຍ> for <ເພີຍ> /pʰətɕʰɛːn/ 'confront' were found among both two groups of students.

5.4.1.3 Similar errors in writing vowel letters

Some shared spelling errors could also be found in substitution of vowel letters. At first, both Chinese and Lao students are not able to correctly choose the multiple

options of /aj/, /an/, and /am/ sounds, such as *<หลงไหล>, *<ไม้บันทึก>, and *<สำพันธ์> are the examples of substitution of vowels shared by them. Then, substituting short for long vowels and vice versa is another similarity shared by Chinese and Lao students. Additionally, both Chinese and Lao students omitted the vowels <-า> /a:/ and <-ะ> /a/ in their spelling, for example, the errors *<สามัคคี> for <สามัคคี> /sǎ:mákk^hi:/ ‘harmony’ and *<สะดวกสบาย> for <สะดวกสบาย> /sàduàksàba:j/ ‘convenient’ were made by both Chinese and Lao students. Finally, the vowels <-อ> /o:/ and <-ะ> /a/ were inserted by both Chinese and Lao students when spelling Thai, as can be seen from the shared error *<คณะบดี> for <คณบดี> /k^hánábo:di:/ ‘dean’.

5.4.1.4 Similar errors in writing final consonant letters

The phoneme-to-multigrapheme correspondences also exist in Thai final consonant letters, which is another pattern of spelling errors shared by Chinese and Lao students. All the /t/, /n/, /k/, and /p/ final sounds were substituted by the two groups of students. The errors such as *<ทรมาร> for <ทรมาน> /t^ho:rámá:n/ ‘torture’ and *<ปรากฏ> for <ปรากฏ> /pra:kòt/ ‘appear’ were found from both Chinese and Lao students.

5.4.1.5 Similar errors in writing unpronounced letters

Both Chinese and Lao students made many spelling errors in unpronounced letters, including substitution, omission, and insertion. Omission is the most common spelling errors in unpronounced letters in both Chinese and Lao students. The errors in unpronounced letters also share other similarities: 1) omitting marked unpronounced consonant letters; 2) omitting unmarked unpronounced consonant letters; 3) omitting unpronounced vowel letters; 4) inserting unpronounced vowel letters; 5) inserting marked unpronounced consonant letters; 6) substituting marked unpronounced consonant letters with other incorrect ones. Table 5-64 displays some shared errors made by Chinese and Lao students.

Table 5-64 Spelling errors in unpronounced letters shared by Chinese and Lao students

No. of similarities	Misspelled words	Correct words	Meaning
1)	*โทรทัศน์ /t ^h o:rát ^h át/	โทรทัศน์ /t ^h o:rát ^h át/	television
2)	*สามารถ /sǎ:mâ:t/	สามารถ /sǎ:mâ:t/	can
3)	*อนุมัติ /ʔánúmat/	อนุมัติ /ʔánúmat/	approve
4)	*ผูกพัน /p ^h ù:kp ^h an/	ผูกพัน /p ^h ù:kp ^h an/	commit
5)	*สังเกต /sǎŋkè:t/	สังเกต /sǎŋkè:t/	observe
6)	*มอเตอร์ไซด์ /mo:tɕ:saj/	มอเตอร์ไซด์ /mo:tɕ:saj/	motorcycle

5.4.1.6 Similar errors in writing tone markers

The similar errors of tone markers can be found in omission and insertion. Firstly, both Chinese students and Lao students omitting <◌◌̎> and <◌◌̎̎>. Then the insertion of <◌◌̎̎̎> and <◌◌̎̎̎̎> is found among both two groups of students.

5.4.2 Differences in patterns of spelling errors between Chinese and Lao students

Apart from the similarities, there are also various differences between Chinese and Lao students in terms of patterns of spelling errors. In its entirety, the total number of the spelling errors made by Lao students is nearly twice as many as Chinese students', which reflects that Lao students have more weak points than their Chinese counterparts in spelling Thai. Apart from that, Chinese students made more spelling errors in writing vowels, then initial consonants, final consonants, unpronounced letters, and tone markers; while Lao students have more difficulty in dealing with initial consonant letters, followed by final consonant letters, vowel letters, unpronounced letters, and tone markers, as illustrated in Figure 5-4 and Figure 5-5.

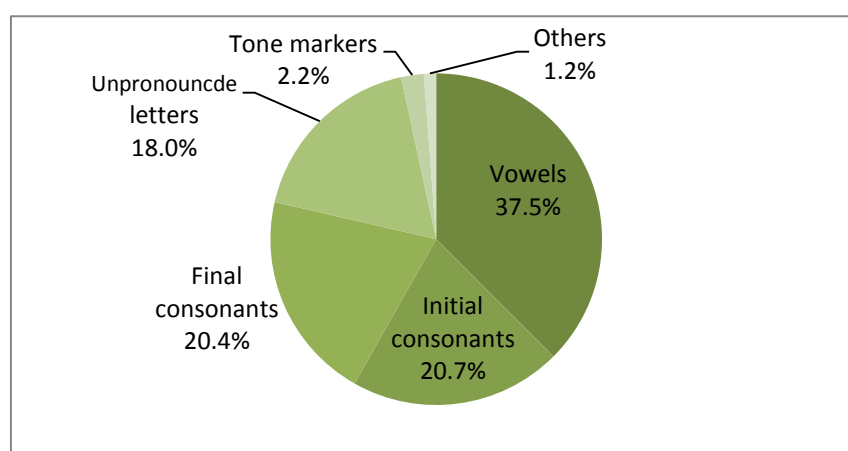


Figure 5-4 Spelling errors made by Chinese students classified by linguistic features

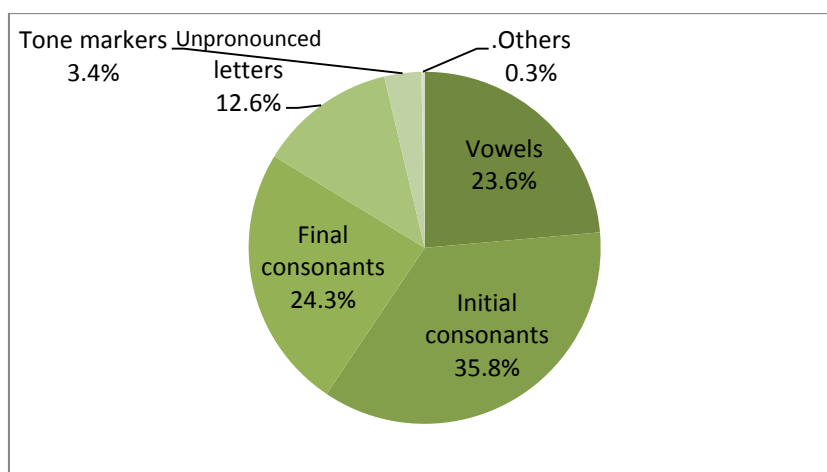


Figure 5-5 Spelling errors made by Lao students classified by linguistic features

5.4.2.1 Differences in errors in writing initial consonant letters

Firstly, Chinese students substituted voiced for voiceless initial consonant and vice versa; however, similar spelling errors could not be found among Lao students. Moreover, substituting <ล> /l/ for <น> /n/ is only made by Chinese students. Lao students also had their particular substitution of initial consonant letters, which were not found among Chinese students: substituting /s/ for /tɕʰ/ and vice versa. The spelling errors such as *<ชดชื่น> for <สดชื่น> /sɔ̌ttɕʰi:n/ ‘be fresh’ and *<เซ่น> for <เข่น> /tɕʰɛ:n/ ‘such as’ were only made by Lao students.

Secondly, there are some differences on the errors in omission of initial consonant letters. Chinese students tended to omit the unpronounced leading consonant letter <ห> /h/, whereas Lao students either omitted the second consonant letter of true and false clusters such as <ปล> /pl/, <คร> /kʰr/, <สร> /s/, <ศร> /s/, or <จร> /tɕr/.

Finally, in insertion of initial consonant letters, the errors made by Chinese and Lao students also show differences. Chinese students only inserted a <ร> /r/ in the second syllable of <สับปะรด> /sàppàrót/ ‘pineapple’. Lao students inserted various initial consonant letters: unpronounced leading consonant letter <อ> /ʔ/ and <ห> /h/, unpronounced consonant letter <ร> /r/ in some false clusters, or a pronounced <ร> /r/, as illustrated in Table 5-34.

5.4.2.2 Differences in errors in writing vowel letters

In substitution of vowel letters, Chinese students made many errors in using <อู> /u:/, <อ> /ɔ:/, <โ> /o:/, <เ> /au/, <อ> /ɔ:/, <-> /a:/, and <แ> /ɛ:/, as shown in Table 5-

5. However, similar spelling errors were never made by Lao students. The substitution which was only made by Lao students is substituting Lao vowel letters for Thai letters. Then, the omission of <ุ> /u:/ was only found from Lao students and the insertion of <-า> /a:/ were only found among Chinese students. On the other hand, the misplacement of vowel letters was only made by Lao students.

5.4.2.3 Differences in errors in writing final consonant letters

Lao students only misspelled homophonic final consonant letters, such as substituting <ร> for <น> in <ทรมาน> /t^hɔːrámɑːn/ ‘torture’. However, Chinese students also made spelling errors in other final consonant letters apart from the homophonic ones; i.e., the misuse among three closed ending sounds /k/, /t/, and /p/, or three open ending sounds /ŋ/, n/, and /m/, such as *<ผู้ตพัน> for <ผู้กพัน> /p^hùːk^han/ ‘commit’ or *<ขนน> for <ขนม> /k^hà^hnǒm/ ‘sweets’; substituting <น> for <ก> in <สะดวกสบาย> /sà^hdùaksà^hbaj/ ‘convenient’.

On the other hand, the spelling errors in insertion and omission of final consonant letters were sporadically found and the patterns show no representativeness, so the patterns of spelling errors in final consonant insertion and omission are not compared here since those spelling errors do not have representativeness.

5.4.2.4 Differences in errors in writing tone markers

In terms of spelling errors in tone markers, three differences can be noticed from Table 5-63. Firstly, Chinese students tend to substitute <◌◌◌> for <◌◌◌> while Lao students are likely to substitute <◌◌◌> for <◌◌◌>. Secondly, misplacement of tone markers was not found among Chinese students while Lao students misplaced some tone markers when spelling Thai. Finally, Chinese students inserted a <◌◌◌> in <ตอนนี้> /tɔːnní/ ‘now’ while Lao students did not make any spelling errors in <◌◌◌>.

5.5 Summary

To sum up, this chapter presents the patterns of all the spelling errors found in the data collected from the ninety participants of the study. The spelling errors made by each group of students are classified and explained with examples. Chinese students made the most spelling errors in writing Thai vowel letters while Lao students have the

biggest problem in dealing with Thai initial consonant letters. Moreover, the patterns of the spelling errors made by Chinese and Lao students are also compared. Errors in substitution occupy a predominant percentage in both Chinese and Lao student's spelling errors. Apart from that, other similarities are also found. For example, both Chinese and Lao students made a large number of spelling errors when dealing with the homophonic letters in Thai, no matter vowels, initial consonants, and final consonants; both Chinese and Lao students substituted <ล> /l/ for <ร> /r/ and vice versa. On the other hand, both the two groups students have their own particular spelling errors which are not found in their counterparts. For example, Chinese students made many errors in writing the back vowels in Thai while Lao students are very clear in using those vowels; Lao students are confused about /s/ and /tɕ^h/ sounds while similar errors cannot be found among Chinese students; Lao students also substituted Lao vowel letters for Thai vowel letters while Chinese students did not.

The next chapter will focus on the analysis of the potential causes of spelling errors and the comparison among the different groups of students.

Chapter 6 Causes of Spelling Errors in Thai Made by Chinese and Lao Students

This chapter aims to discuss causes of the spelling errors made by Thai, Chinese, and Lao students. At first, various causes of the spelling errors made by the three groups of students are explained respectively. Further, the causes of Chinese and Lao are compared in order to see what the similarities and differences are behind the spelling errors made by the students with different native languages.

6.1 Causes of spelling errors made by Thai students

As an alphabetic language, Thai orthography is relatively transparent. One-to-one correspondence between phonemes and graphemes can be seen in almost all words (Winskel and Iemwanthong 2010). Even so, some complex forms still exist in Thai, which impose tremendous burdens on not only foreign learners but also native speakers in spelling Thai words. As mentioned earlier in 5.3, 151 spelling errors were made by the thirty Thai native speakers who participated in the present study. Apart from some idiosyncratic errors, most of the errors made by them resulted from the complexity of the Thai writing system.

6.1.1 Complexity of the Thai writing system

As the vehicle of human's communication, language continuously changes. One of the most important factors that make a language evolve is borrowing words from other languages. Borrowing words in the course of communication between languages is a very natural phenomenon. The Thai language is also constantly changing by borrowing new words from other languages. Due to culture, migration, religion, academic communication and other factors, the Thai language has already borrowed a huge number of words from Sanskrit, Pali, Khmer, Chinese, English, French and other foreign languages (Phongphaibul 1995). Foreign words were used in Thai probably as early as the Ramkhamhaeng period, as many loan words from Sanskrit, Pali, and Khmer were recognized in the Ramkhamhaeng inscription, which is the oldest Thai language inscription (Krairiksh 1988).

The borrowed words from various languages are widely used in royal language, literary language, and daily language (Songsilpa 2010). On the one hand, borrowing words from other languages made the Thai language much more abundant in terms of vocabulary. Thai people can use different words to describe the same thing according to the context. For example, apart from the word <ใจ> /tɕaj/ ‘heart’, Thai people can also use other loan words from foreign languages to express the same meaning, such as <กมล> /kàmon/, <มโน> /máno:/, and <หฤทัย> /hàrút^haj/ (Songsilpa 1983). On the other hand, due to the fact that the Thai language is different from those foreign languages more or less, the pronunciation of those loan words has to be adjusted according to the language preference of Thai people. For example, <ส>, <ศ>, and <ษ> used to have different pronunciations in Sanskrit. When they become loan words in Thai, they are pronounced the same as /s/ (Bandhamedha 1974). The merging of several sounds into one has caused discrepancy between letters and sounds, e.g., the letters <ฐ>, <ฑ>, <ฒ>, <ณ>, <น>, <ธ> represent only sound; i.e., /t^h/. According to Songsilpa (1983), similar adjustment can be found in the Thai final consonant system when Thai borrowed Khmer words, for example, when the Khmer word <กาจ> /ka:c/ was borrowed into Thai, the final sound /c/ was changed into /t/ in <กาจ> /kà:t/ ‘very’; when the Khmer word <ตบาล> /tbal/ was borrowed in Thai, the final sound /l/ was changed into /n/ in the Thai word <ตะบัน> /tàban/ ‘punch’. Borrowing words from Khmer also causes complexity of final consonant letters in the Thai writing system.

In addition, since there are not many consonant clusters in Thai, the adjustment in consonant clusters by adding and reducing sounds can be seen when Thai borrowed words from Khmer (Songsilpa 1983). For instance, Thai people added a vowel sound between the two letters of the cluster so as to avoid the use of consonant clusters, such as from <ขุทិ> /k^htih/ in Khmer was changed into <กะทิ> /kàt^hi/ ‘coconut milk’, or from <สุอาด> /sʔa:t/ in Khmer into <สะอาด> /sàʔà:t/ ‘clean’ in Thai. It can be seen from these two examples that a vowel /a/ was inserted between the two consonants in words adopted from Khmer. Sometimes the inserted vowel sound /a/ may not appear in writing, such as the word <ถวาย> /t^hàwǎ:j/ ‘offer’, which was borrowed from the Khmer word <ถวาย> /t^hwa:y/. Inserting a whole syllable was also used in Thai

words borrowed from Khmer. For example, when the word <ขูทึง> /k^hti:ŋ/ in Khmer was borrowed in Thai, the consonant cluster <ขูท> /k^ht/ was changed into another syllable <กระ> /krà/; therefore, the Thai version of this borrowed word was <กระทึง> /kràt^hiŋ/ ‘gaur’. Reducing sound was another way to avoid the use of consonant clusters, such as from the Khmer word <สุรวย> /sruay/ to <สวย> /sǔaj/ ‘beautiful’ in Thai, or from the Khmer word <เสฺรจ> /srac/ into <เสฺรจ> /sèt/ ‘finish’ in Thai, in which the cluster sound /sr/ in these two words simplified as a single consonant sound /s/.

Moreover, the Thai language has borrowed many words from some polysyllabic languages, such as Sanskrit and Pali. Since Thai is a monosyllabic language and Thai words are mostly monosyllabic, those polysyllabic words borrowed from other languages need to be modified according to Thai people’s language preference. For example, Pali or Sanskrit words are normally long with more than one consecutive consonants followed by the unmarked vowel /a/. When such words are adopted into Thai, they are shortened, first by dropping the final vowel /a/, then by simplifying the consonant clusters. Thai people would pronounce only the first consonant sound and the others would be left unpronounced by adding a sound-killing marker <ั>, such as <ยักษ> /jaksā/ becomes <ยักษั> /ják/ ‘giant’ and <ลักษณ> /laksana/ becomes <ลักษณั> /lák/ ‘characteristic’; but in a cluster with a <ร>, the <ร> would be unpronounced without adding a <ั>, such as from <จกร> to <จักร> /tɕàk/ ‘discus’ (Bandhmedha 1974). As can be seen from these examples, many unpronounced letters emerged because of the elimination of syllables. Another way to reduce the number of syllables is to gather some consonant letters as final consonants, for example, the word <รส> in Sanskrit is pronounced as <รสสะ>, when borrowed in Thai, it is pronounced as <รด> /rot/ (the letter <ส> is pronounced /t/). In short, many sounds borrowed from Sanskrit have merged into very few sounds in Thai, such as <จ>, <ฉ>, <ช> <ฌ>, <ญ>, <ฎ>, <ฏ>, <ฒ>, <ต>, <ถ>, <ท>, <ธ>, <ศ>, <ษ>, <ซ>, <ส> in the final position in Sanskrit words have become only /t/ in Thai (Bandhmedha 1974). This is a cause of difficulty in spelling Thai words.

It is apparent that foreign words were adjusted for the language preference of Thai people after they were borrowed into Thai. However, the spelling of all the words is meant to be as close as possible to that of the words in their donor’s language in

order to demonstrate their origin (Thonglor 2012). This makes Thai orthography opaque and complicated to some extent. Many homophonic letters, unpronounced letters, and other complex forms were caused by borrowing words from other languages, which further resulted in spelling errors.

6.1.1.1 The existence of homophonic letters

There exist many homophonic letters in Thai. This means that one phoneme may be represented by several different graphemes. In practice, choosing the correct graphic representation of a certain sound depends to a great extent on the memory of spellers, as the rules related to those homophonic letters are too complex to apply, especially for foreign learners. More than one graphic option of a phoneme made Thai students use certain vowel letters, initial consonant letters, and final consonant letters for the correct ones.

There are three groups of homophonic vowel letters in the Standard Thai. The first group is the letters <ไ->, <เ->, <ัย>, and <ไย> representing /aj/ sound. Many spelling errors were made by Thai students because they are confused about the multiple choices of written forms for the /aj/ sound. For example, the errors like *<ไชยชนะ> for <ชัยชนะ> /tɕ^hajtɕ^haná/ ‘victory’, *<หลงไหล> for <หลงไหล> /lɔŋlǎj/ ‘to be fascinated’, and *<ผัดไท> for <ผัดไทย> /p^hatt^haj/ ‘Thai fried noodles’ are commonly seen. The second group is the letters that represent /an/. They are <-รร>, <ัน> and <-รรณ>. The errors such as *<บันเทา> for <บรรเทา> /bant^hau/ ‘relieve’ and *<สร้างสัน> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’ were made by Thai students due to the fact that they are not clear about the correct representation of the /an/ sound in some particular words. The last group is the letters representing /am/ sound. They are <-รรม>, <ำ> and <้ม>. Some spelling errors made by Thai students can be traced back to the multiple graphic representations of /am/ sound, such as *<สัมพันธ์> for <สัมพันธ์> /sǎmp^han/ ‘relationship’.

Besides, it is even more common to find the phoneme-to-multigrapheme correspondences in both initial and final consonants. In the initial consonant system, many sounds can be represented by more than one letter, such as /s/ and /t^h/ sounds. The choices of multiple graphic representations of initial consonant phonemes

depend very much on the memory of writers. Thai students made many spelling errors in substituting initial consonant letters with others representing the same pronunciation. For example, more than sixty percent of Thai students misspelled the word <กงสุล> /koŋsŭn/ ‘consul’ as *<กงศุล>, in which the initial consonant <ส> was replaced by its homophonic counterpart <ศ>. In the final consonant system, nine final sounds are represented by 35 letters as listed in Table 4-3. It also depends on the memory of spellers when choosing the correct letter for a certain final sound. As a result, similar substitution errors are also frequently seen, such as *<โอกาส> for <โอกาส> /ʋo:kà:t/ ‘chance’ and *<ทรมาร> for <ทรมาน> /tʰw:ráma:n/ ‘torture’.

6.1.1.2 The existence of unpronounced letters

Another complex form existing in the Thai language is unpronounced letters, which can be either consonant letters or vowel letters. According to Thonglor (2012), most of the unpronounced letters exist in the words which were borrowed from some polysyllabic languages such as Pali, Sanskrit, or English. When those words were borrowed in Thai, some letters became unpronounced in order to reduce the number of syllables, as Thai is a monosyllabic language and Thai words are mostly monosyllabic. However, the spelling of these words is meant to be as close as possible to that of the words in their donor’s language in order to demonstrate their origin. This makes Thai orthography opaque to some extent. As explained in 4.1.1, there are three types of unpronounced letters: 1) unpronounced consonant letters under a sound-killing marker <็> or <การันต์> /ka:ran/, such as <ต์> in <รถยนต์> /rótʃon/ ‘automobile’; 2) unpronounced consonant letter <ร> /r/ without any marker, such as <ร> in <บัตร> /bàt/ ‘card’ or in <สามารถ> /sǎ:mà:t/ ‘be able to’; 3) unpronounced vowel letters, such as <ิ> in <อนุมัติ> /ʋánúmat/ ‘approve’ or <ุ> in <ธาตุ> /tʰà:t/ ‘element’. These unpronounced consonant letters with a sound-killing marker are likely to be misspelled by Thai students. It is found in this study that they omitted them, substituted some other letters for them, or inserted new ones like them, such as *<มอเตอร์ไซ> for <มอเตอร์ไซด์> /mo:tʃ:saj/ ‘motorcycle’, *<โทรทัศน์> for <โทรทัศน์> /tʰo:rátʰát/ ‘television’, and *<ผูกพัน> for <ผูกพัน> /pʰù:kpʰan/ ‘commit’. Also, unpronounced vowel letters were also inserted into words by Thai students, for

example, *<สังเกต> for <สังเกต> /sǎŋkè:t/ ‘observe’ and *<อนุญาต> for <อนุญาต> /ʔànújâ:t/ ‘allow’.

6.1.1.3 Writing the short vowel <-ะ> /a/ or <ประวิสรรชนีย์> /pràwisàntɕʰáni:/

The pronounced short vowel <-ะ> /a/ can be either written or unwritten in Thai words. If the vowel <-ะ> /a/ is written, those words will be called <ประวิสรรชนีย์> /pràwisàntɕʰáni:/. Whether to write the <-ะ> /a/ is another challenge for Thai students’ examples of spelling errors, such as *<สะดวกสบาย> for <สะดวกสบาย> /sàdùaksàbaj/ ‘convenience’, *<คณะบดี> for <คณะบดี> /kʰánáw:di:/ ‘dean’, or *<ทรมาน> for <ทรมาน> /tʰw:ráma:n/ ‘torture’. It is apparent that Thai students have problems in dealing with the vowel <-ะ> /a/.

6.1.2 Idiosyncratic spelling errors

Apart from those errors caused by complexity of the Thai writing system, there is also a small number of idiosyncratic spelling errors made by Thai students, such as *<ตะวันออก> for <ตะวันออก> /táwanʔw:k/ ‘east’, *<สุขภาพ> for <สุขภาพ> /sùkkʰápʰâ:p/ ‘health’, and *<ทรัพย์สิน> for <ทรัพย์สิน> /sápsǐn/ ‘asset’, and etc. These spelling errors are very scattered and unsystematic, which are only found once for each pattern and show no connection with other patterns of spelling errors, so they are grouped separately as idiosyncratic spelling errors.

6.2 Causes of spelling errors made by Chinese students

Based on the errors made by Chinese students, five causes need to be taken into consideration: 1) complexity of the Thai writing system; 2) interference from the Chinese phonological system; 3) differences between the Chinese and Thai writing system; 4) influence from native speakers of Thai.

6.2.1 Complexity of the Thai writing system

Complexity of the Thai writing system is one of the biggest causes of the spelling errors made by Chinese students. As explained below, the complex forms that caused spelling errors among Chinese students mainly include: 1) the existence of homophonic letters; 2) the existence of unpronounced letters; 3) various initial

consonant clusters; 4) complexity of Thai tone system; 5) mismatch between pronunciation and spelling.

6.2.1.1 The existence of homophonic letters

As mentioned in 6.1.1.1, the homophonic letters existing in the Thai vowel system, initial consonant system, and final consonant system made Thai students commit the spelling errors such as *<สำพันธ์> for <สัมพันธ์> /sǎmpʰan/ ‘relationship’, *<กงศุล> for <กงสุล> /kɔŋsǔn/ ‘consul’, *<ทรมาร> for <ทรมาน> /tʰw:ráma:n/ ‘torture’. Likewise, Chinese students also made many incorrect choices when choosing the representation of a certain sound since the spelling of those homophonic letters depends very much on students’ memory. As a result, they massively substituted vowel letters, initial consonant letters and final consonant letters with their homophonic counterparts due to their inaccurate memory.

In the Thai vowel system, all the three groups of homophonic letters mentioned in 6.1 caused Chinese students to make many spelling errors, such as *<หลงไหล> for <หลงใหล> /lɔŋlǎj/ ‘fascinatingly’, *<ไม้บันทัด> for <ไม้บรรทัด> /májbantʰát/ ‘ruler’, or *<กรรมไร> for <กำไร> /kamraj/ ‘profit’. Concerning initial consonants, the spelling errors like *<กงศุล> for <กงสุล> /kɔŋsǔn/ ‘consul’ and *<ไพศาล> for <ไพศาล> /pʰajsǎ:n/ ‘vast’ are frequently seen. Likewise, substituting one final consonant letter with another representing the same sound is also frequently made, such as *<รำคาญ> for <รำคาญ> /ramkʰa:n/ ‘to be annoyed’, *<สังเกต> for <สังเกต> /sǎŋkè:t/ ‘observe’, *<ทรมาร> for <ทรมาน> /tʰw:ráma:n/ ‘torture’ and *<อนุญาต> for <อนุญาต> /ʔànújà:t/ ‘allow’.

6.2.1.2 The existence of unpronounced letters

Unpronounced letters in Thai caused many spelling errors among Chinese as well. Similar to Thai students who made mistakes in spelling, Chinese students are found to have problems in with unpronounced consonant letters with a sound-killing marker. The data show that they omitted them, substituted some other letters for them, or inserted new ones like them, such as *<มอเตอร์ไซด์> for <มอเตอร์ไซด์> /mɔ:tɕ:saj/ ‘motorcycle’, *<ฟุตบอลล์> for <ฟุตบอล> /fútɔw:n/ ‘football’ or *<โทรทัศน์> for <โทรทัศน์> /tʰo:rátʰát/ ‘television’. On the other hand, unpronounced vowel letters as well as

consonant letters without a sound-killing marker also caused Chinese students to omit or insert them, such as *<อนุมัติ> for <อนุมัติ> /ʔànúmát/ ‘approve’, *<ปราถนา> for <ปรารถนา> /prà:tʰàná:/ ‘desire’ and *<อนุญาต> for <อนุญาต> /ʔànújâ:t/ ‘allow’.

6.2.1.3 Various initial consonant clusters in the Thai language

In many cases, the initial consonant of Thai syllables is not a single consonant letter, which might consist of two sequential consonants. As explained in 4.1.1, Slayden classifies the initial consonant sequences into four type clusters: true clusters, false clusters, leading consonant clusters, and other clusters.

The first group, true clusters do not seem to be a big problem for Chinese students. They accurately spelled the words with true clusters such as <แลกเปลี่ยน> /lɛ:kplian/ ‘exchange’, <ปรากฏ> /pra:kòt/ ‘appear’, or <เครื่องมือ> /khrŭm̩mɯ:/ ‘tool’. Only one spelling error related to true initial clusters was recorded: *<สับประรด> for <สับปะรด> /sàppàrót/ ‘pineapple’, in which one Chinese student formed a true cluster <ปร> /prà/ by inserting a <ร> /r/.

Concerning the second group, false clusters, Chinese students made some spelling errors when spelling the false cluster <ทร> /s/. Some of them substituted the single consonant letter <ซ> /s/ for <ทร>, such as *<ซบสิน> for <ทรัพย์สิน> /sápsin/ ‘asset’ and *<ซาย> for <ทราย> /saj/ ‘sand’.

Then, in terms of leading consonant clusters, Chinese students made spelling errors in both tone-shifting and epenthetic leading consonant clusters. They tended to omit the unpronounced <ห> /h/ in tone-shifting leading consonant clusters, such as *<ลงไล> and *<ลงไหล> for <หลงไหล> /lǒŋlǎj/ ‘to be fascinated’. On the other hand, Chinese students made some spelling errors in epenthetic leading consonant clusters by inserting the unwritten vowel <ะ> /a/, such as *<ปฏิเสธ> for <ปฏิเสธ> /pàtìsè:t/ ‘refuse’ or *<กรกฎาคม> for <กรกฎาคม> /kàràkàda:kʰom/ ‘July’.

Finally, the clusters which contain a vowel sound /w:/ also caused Chinese students to insert the unwritten vowel letter <อ>, such as *<คณบดี> for <คณบดี> /kʰánábɔ:di:/ ‘dean’.

6.2.1.4 Complexity of Thai tone system

Another complexity in the Thai writing system that caused spelling errors among Chinese students is the complexity of tones of the Thai language. As explained in 4.1.1, the tone rules of Thai are extremely complicated, tone markers are not always corresponding with tone value of words. Tone markers, the class of initial consonants, along with the type of syllables, together with the length of vowels are all the factors that influence tone value of a syllable.

Based on the errors made by Chinese students, the percentage of errors in tone markers is relatively small. However, those errors still reflect the incompetence of Chinese students when encountering the complicated tone system of Thai. They substituted wrong tone markers for correct ones, omitted necessary ones, or inserted unnecessary ones in the words and made the words deviated from their original pronunciation. On the other hand, the class of initial consonant letters also plays an important role in determining the tone value of syllables. Chinese students substituted low-class for high-class initial consonant letters and vice versa, which reflects that they are unclear about the inherent tone of the three-class initial consonants. When these paired consonants are put into real words, the inherent tones of them might cause Chinese students to make some spelling errors, such as *<พุกพัน>, *<ภูกพัน> for <พุกพัน> /p^hù:kp^han/ ‘associate’ and *<สามัคชี> for <สามัคคี> /sǎ:makk^hi:/ ‘harmony’.

6.2.1.5 Mismatch between pronunciation and spelling

As mentioned in 4.1.1, Thai vowels are not always written in the consonant-vowel linear order and their position in a syllable can be very diverse, as shown in Figure 6-1.

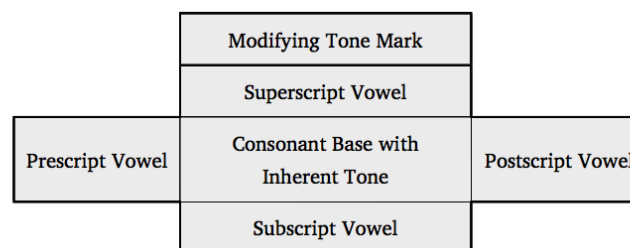


Figure 6-1 Thai syllable structure (Lew 2014, 30)

As explained in 4.1.1, the mismatch between writing and pronunciation occurs when vowels are put before initial consonants, including both single initial consonant letters and various initial consonant clusters. The errors *<พาเชิญ>, *<พะเชิญ> for *<เผเชิญ>

/p^hàtɕ^hx:n/ ‘confront’ and *<สเห็น> for <เสน่ห์> /sà nè:/ ‘charm’ are found related to misaligned vowels. It is also notable that Chinese students have problems in spelling misaligned vowels only when they are connected with an initial consonant cluster. In contrast, they correctly spelled the word such as <เก่าแก่> /kàukè:/ ‘ancient’ or <ให้> /hâj/ ‘give’ since the misaligned vowels are spelled with a single initial consonant letter rather than a consonant cluster.

6.2.2 Interference from the Chinese phonological system

Numerous studies have proved that adults who learn a foreign language tend to have a noticeable accent when speaking the target language, which deviates from the standard pronunciation of native speakers (Flege and Fletcher 1992, McAllister 1997, McAllister, Flege, and Piske 2002). The correlation between misarticulation and spelling can be easily noticed when spelling alphabetic languages, in which spelling depends very much on sounds. Carrying accents in speaking foreign languages might cause errors in spelling. Many researchers have demonstrated that some errors in spelling are related to errors in pronunciation (Grigonyte and Hammarberg 2014, Groff 2012, Kay 1930). It is apparent that learners’ native language is an inevitable influential factor in foreign language spelling.

Chinese students’ native languages also play an important role in their Thai spelling. As explained below, both the interference from their dialects and differences between Chinese and Thai phonology cause wrong articulation in Thai among Chinese students. The misarticulation is further transferred when Chinese students spell Thai words. The sounds that are transferred by Chinese students will be explained in detail with examples in the following sections.

6.2.2.1 The interference from Chinese students’ dialects

According to Zhai and Zhao (2005), dialects of Chinese students play an important role in their foreign language learning. For example, English phonetic acquisition is strongly influenced by Chinese students’ dialects. The students from Shandong Province¹⁶ carry a negative transfer from their dialects to English, which causes misarticulation in the

¹⁶ Shandong Province is a coastal province located in the east of China, and Jilu Mandarin is the predominant dialect in this region.

front nasal sound /n/ (Kong 2006). Chinese students' Thai pronunciation is also strongly influenced by their mother tongue. The deviated pronunciation is caused by the transfer of some particular sounds in their mother tongue into Thai. Then the mispronounced sounds caused misspelling. The process is as follows:

Chinese phonology → Chinese pronunciation of Thai → Chinese spelling of Thai words

Some spelling errors were found to be related to students' dialects. For example, *<แล่นแพ้น> for <แน่นแพ้น> /nê:nfɛ:n/ 'firm', *<ชัยชนะ> for <ชัยชนะ> /tɕ^hajtɕ^haná/ 'victory', and *<อนุญาต> for <อนุญาต> /ʔànújâ:t/ 'allow'. The three spelling errors share one similarity, which is the substitution of <ล> /l/ for <น> /n/. They were made by two different students. According to basic information provided in the first part of the questionnaire, one came from Sichuan Province and the other came from Chongqing City. Both of them speak the Southwest Mandarin as their dialect. Based on the findings of the research conducted by Sun (2006) and Peng (2008), /n/ sound and /l/ sound in the Southwest Mandarin are not phonemes. In other words, the people who speak the Southwest Mandarin cannot differentiate the meaning of the words if /n/ sound and /l/ sound are interchanged. Therefore, they often confound these two sounds when speaking foreign languages, such as the Standard Mandarin, English and Thai.

Similarly, such spelling errors as *<น่านฟ้าน> for <แน่นแพ้น> /nê:nfɛ:n/ 'firm', *<พรัายหลาย> for <แพร่หลาย> /p^hrɛ:lâ:j/ 'widespread, or *<सान> for <แสน> /sɛ:n/ 'hundred thousand' are only made by the Chinese students who speak the Jin Mandarin, which spreads around the north of Shaanxi Province, most part of Shanxi Province, and the mid-east part of Inner Mongolia Autonomous Region (Wen 1997). According to Li (2006), when the vowel /a/ is connected with a front nasal /n/, the people speaking the Jin Mandarin will pronounce /ɛ:n/ instead of /a:n/, for example, <看> /kân/ means 'watch' in Mandarin; however, the word is pronounced as /kɛn/ in the Jin Mandarin. Consequently, the students who speak the Jin Mandarin are not clear about /a:/ and /ɛ:/ when spelled with a final sound in Thai. The spelling errors like *<น่านฟ้าน>, *<सान>, *<พรัายหลาย> were by the students who speak the Jin Mandarin.

Additionally, many spelling errors in substituting back nasal final sound for front nasal final sound can also be explained by the influence from students' dialects. As shown in Table 6-2, the Chinese students who substituted back nasal final sound for front nasal final sound speak the Jin Mandarin and Jilu Mandarin respectively, which are all the dialects spoken in the north part of China. Generally speaking, the people from north carry stronger back nasal sound than those from the south. Obviously, the strong back nasal of Chinese northerners is transferred into Thai as well. The students who can distinguish the two sounds clearly in their dialects never misuse between front nasal sound /n/ and back nasal sound /ŋ/.

Table 6-1 Examples of spelling errors made by Chinese students caused by substituting back nasal final sound for front nasal final sound

Misspelled words	Correct words	Meaning	Students' dialects
*กลิ่น /kriŋ/	กลิ่น /krin/	smell	Jin Mandarin
*ทรัพย์สิน /sápsɿŋ/	ทรัพย์สิน /sápsɿn/	asset	Jin Mandarin
*เหมือง /múan/	เหมือน /múan/	like	Jin Mandarin
*สนใจ /sɔŋtɕaj/	สนใจ /sɔntɕaj/	care for	Jilu Mandarin

6.2.2.2 The differences in vowel system between the Chinese and Thai phonology

The differences between Chinese and Thai in vowel system caused some spelling errors among Chinese students. Firstly, the distinction between long vowels and short vowels does not exist in Chinese phonological system. Chinese students have big problems in grasping duration of vowels so that the pronunciation of Chinese students in long and short vowels does not sound different as it should be (Zhang 2016). The spelling errors such as *<สังเกต> for <สังเกต> /sǎŋkè:t/ 'observe' or *<สัมพันธ์> for <สัมพันธ์> /sǎmp^han/ 'relations' were found. Moreover, they also tended to insert a long vowel in some words, such as *<วัฒนธรรม> for <วัฒนธรรม> /wát^hánát^ham/ 'culture', *<กรกฎาคม> for <กรกฎาคม> /kàràkàda:k^hom/ 'July', *<ทรมาน> for <ทรมาน> /t^hɔ:ràma:n/ 'torture', and *<อนาคต> for <อนาคต> /ʔàna:k^hót/ 'future'. Those errors can be explained by Chinese students' insensitivity to length of sounds as well because they misemployed a long vowel to replace a short one. Secondly, the deviated pronunciation of Chinese students is also reflected in back vowel sounds; i.e., <อ> /u:/ and <อ> /u/, <โ> /o:/ and <โ> /o/, <อ> /ɔ:/ and <เอ> /ɔ/, <อ> /ɔ:/ and <เอ> /ɔ/.

only /u/ and /o/ used as back vowels in Chinese, whereas Thai has six back vowels: /u:/, /u/, /o:/, /o/, /ɔ:/, and /ɔ/. Generally speaking, there is not much difference in /u/ sound between Thai and Chinese, but the vowel /o/ in Chinese is pronounced with much more rounded lips than <โ- > /o:/ in Thai and the vowel <-อ> /ɔ:/ does not exist in Chinese. The comparison in monophthong chart between Chinese and Thai is shown in Figure 6-2 and Figure 6-3. The differences between Chinese and Thai in back vowels make Chinese students have big problems in pronouncing Thai back vowels clearly, especially <โ- > /o:/ and <-อ> /ɔ:/ together with their short counterparts.

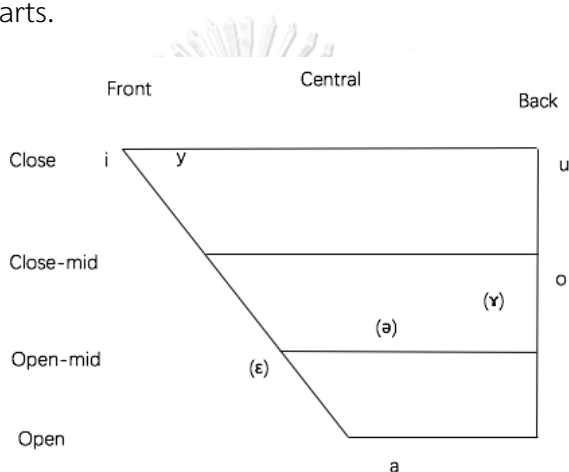


Figure 6-2 Chinese monophthong chart (Lin and Wang 2014)

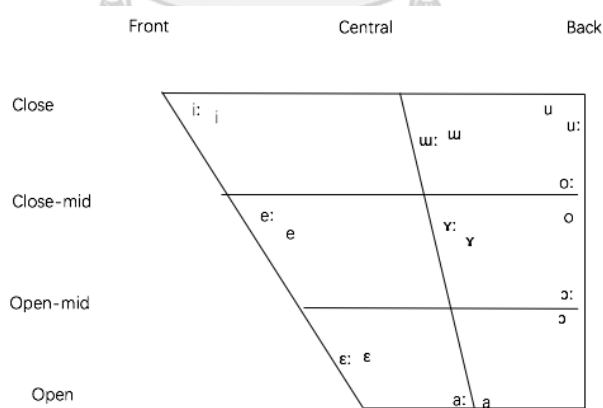


Figure 6-3 Thai monophthong chart (Slayden 2008)

The misarticulation of Chinese students in pronouncing Thai back vowels made them commit a large number of spelling errors, such as *<กงส์ล> for <กงส์ล> /kɔŋsǔn/ ‘consul’, *<โมเตอร์ไซ> for <มอเตอร์ไซด์> /mɔ:tɔ:saj/ ‘motorcycle’, or *<ประสอบการณ์> for <ประสบการณ์> /pràsɔpka:n/ ‘experience’. The spelling error like *<งูห่อ> for <งูเห่า>

/ŋu:hàu/ ‘cobra’ can also be traced back to the unclearness of Chinese students in back vowels. The /ɔ:/ sound in Thai is absent from Chinese so that many Chinese students have problems in distinguishing between <-อ> /ɔ:/ and <-า> /au/.

6.2.2.3 The differences in initial consonant system between the Chinese and Thai phonology

Some initial consonant phonemes existing in Thai are absent from the Chinese phonological system. Firstly, there is no difference between voiced consonants and voiceless consonants in Chinese phonology. As a result, it is very difficult for Chinese students to pronounce those consonants clearly, especially voiced consonants. The misarticulation of Chinese students influences their spelling. The spelling errors like *<ปัจจุบัน> for <ปัจจุบัน> /pàttɕùban/ ‘present’ or *<ปะหมี่> for <ะหมี่> /bàmi:/ ‘noodle’ were committed by them. Secondly, the nonexistent <ร> /r/ sound also caused many spelling errors. Most of Chinese students are not able to pronounce the trill /r/ in Thai so they tend to use /l/ sound to replace it, which causes the confusion between these two sounds. It can be seen from some spelling errors made by them, such as *<กริ่น> for <กลิ่น> /klin/ ‘smell’ and *<ปลากร> for <ปรากฏ> /pra:kòt/ ‘appear’. They substituted <ร> /r/ for <ล> /l/ and vice versa.

6.2.2.4 The differences in final consonant system between the Chinese and Thai phonology

Three stop final consonant sounds /k/, /t/, and /p/, which do not exist in Chinese phonological system, were largely misused by Chinese students. Chinese students always carry an unclear pronunciation when pronouncing the stop final sounds of Thai. In their spelling, the errors like *<เครียด> for <เครียด> /k^hriat/ ‘worried’ or *<ปฏิเสธ> for <ปฏิเสธ> /pàtisè:t/ ‘refuse’ can be found.

6.2.3 Differences between the Chinese and Thai writing system

Based on how spoken language is represented, writing system in the world can be classified into three types: 1) alphabetic languages, representing spoken language by letters; 2) syllabic writing systems, using syllables to represent spoken language; 3) logographic languages, choosing characters to represent spoken language (Wang, Koda, and Perfetti 2003). Based on this classification, the Thai language is an alphabetic

language since its spelling is based on sounds, whereas Chinese is classified into logographic writing system because Chinese selects characters to represent its spoken language. The great differences between Chinese and Thai writing system also caused some spelling errors among Chinese students.

At first, Chinese students made some errors which do not meet the basic orthographic rules in Thai. For example, in the misspelled word *<ศัพท์> for <ศัพท์> /sàp/ ‘vocabulary’, the writer added a sound-killing marker in final consonant of the word, which makes the misspelled word deviated dramatically from the basic structure of Thai syllable. Another example is *<เก็บ> for <เก็บ> /kèp/ ‘keep’. Obviously, the high tone marker <็> and vowel shortening marker <๋> were mixed up by the writer, which also reflects that Chinese students are not fully competent to use various markers to present sounds.

Moreover, some Chinese students are not familiar with basic structures of some vowel letters, such as *<เคย> for <เคย> /k^hɔ:j/ ‘ever’. The writer could not spell the letter of /ɔ:j/ correctly so that he inserted a <็> /i/, which made the word become unpronounceable. Even though this type of spelling errors is not common among Chinese students, it still reflects that some Chinese students are confused about the correct writing of some Thai graphemes.

6.2.4 The influence from Thai native speakers

As communication between Chinese students and Thai native speakers becomes more frequently, Chinese students have more opportunities to learn Thai from native speakers, especially from young generations via the internet. Actually, some language habits and some words used by young Thais are informal and will only appear in their spoken language. However, Chinese students, as foreign language learners, do not have an adequate understanding of it.

Judging from this, the spelling errors like *<ก็> for <ก็> /k^hi:/ ‘also’ and *<อยู่> for <อยู่> /jù:/ ‘exist’ can be attributed to the influence from Thai native speakers. It is because native speakers simplify some words for convenience but only use them in informal occasions, such as chatting with friends or posting content on social applications.

Some Chinese students tend to imitate this way of spelling words because it is regarded as being native.

Undoubtedly, it is helpful for Chinese students to enhance their Thai proficiency by communicating with Thai native speakers; however, they also need to make it clear that there exist diverse forms of Thai, including different registers used in formal and informal situations, or different dialects used by various groups of people. When some language habits are used in casual situations, they might be considered to be correct. On the contrary, they might be regarded to be erroneous when used in a formal situation. For this reason, it is necessary to distinguish between formal and informal expressions before foreign learners imitate the language habits of native speakers. The Thai language instructors should pay more attention to guiding the students to choose the appropriate register or style in communication.

6.2.5 Idiosyncratic spelling errors

Similar to the spelling errors made by Thai students, several spelling errors made by Chinese students can also be grouped into idiosyncratic errors, such as *<วัฒนธรรม> and *<วัฒนธรรม> for <วัฒนธรรม> /wát^hánát^ham/ ‘culture’. Moreover, an insertion of final consonant letter in the following sentence seems to be an idiosyncratic error as well, in which the writer inserted a final consonant <ก> /k/ in the word <มา> /ma:/ ‘come’.

<เพราะผม*มาจากประเทศจีน>
 /p^hrɔ̌ p^hɔ̌m mā:k tɕà:k prát^hét tɕi:n/
 ‘Because I come from China’

Likewise, the errors like *<ผลิตภัณฑ์> for <ผลิตภัณฑ์> /pàlittàp^han/ ‘product’ or *<ประสบการณ์ > for <ประสบการณ์ > /pràsòpka:n/ ‘experience’ are also idiosyncratic errors in writing since only one example is found for each error and no systematicity or representativeness is shown.

To sum up, as shown in Table 6-3, complexity of the Thai writing system caused the most spelling errors, more than 60 percent of the spelling errors resulted from the incompetence of Chinese students when confronting various complex forms in the Thai language. Interference from the Chinese phonological is another main cause,

accounting for 37.8 percent of all the spelling errors. Apart from that, differences between the Chinese and Thai writing system, and influences from native speakers also need to be considered since these factors also brought about some scattered errors among Chinese students.

Table 6-2 Causes of spelling errors made by Chinese students

Causes	Frequency	Percentage
Complexity of the Thai writing system	525	61.1%
Interference from the Chinese phonological system	324	37.8%
Idiosyncratic spelling errors	5	0.6%
Differences between the Chinese and Thai writing system	3	0.3%
Influence from Thai native speakers	2	0.2%
Total	859	100%

6.3 Causes of spelling errors made by Lao students

Four causes can be cited to explain the spelling errors made by Lao students; namely, complexity of the Thai writing system, differences between the Lao and Thai writing system, and interference from the Lao phonological system.

6.3.1 Complexity of the Thai writing system

The analysis of spelling errors committed by Lao students proves that Lao students are not fully competent to many complex forms in Thai; i.e., the existence of homophonic letters; the existence of unpronounced letters; false initial consonant clusters.

6.3.1.1 The existence of homophonic letters

Sharing many similarities with the spelling errors made by Thai students, many spelling errors of Lao students resulted from the existence of homophonic letters in Thai. When encountering multiple letters representing the same sound, Lao students made many incorrect choices, including vowel letters, initial consonant letters, and final consonant letters.

In the vowel system, the four graphemes of /aj/ sound: <ไ->, <ไ->, <ัย>, and <ไ-ย> were massively misused by Lao students. The errors such as *<หลงไหล> for <หลงไหล>

/lɔ̃ŋlǎj/ ‘to be fascinated’ and *<มอเตอร์ชัย> for <มอเตอร์ไซค์> /mɔ:tɕ:saj/ ‘motorcycle’ were frequently found among them. Besides, the three representations of /an/ sound: <รร>, <ัน>, and <รรณ> also caused some errors, for example, *<สร้างสันต์> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’. Finally, the spelling errors like *<สัมพันธ์> for <สัมพันธ์> /sǎmpʰan/ ‘relations’ was also seen, which was caused by the multiple graphic options of /am/ sound.

The homophonic initial consonant letters also caused a large number of spelling errors among Lao students, including the various graphic representations of /s/, /t/, /d/, /k^h/, /t^h/, /p^h/, /j/, and /n/ sounds. Hass (1956, 41) defines that there are “regular spelling” and “irregular spelling” among the consonant letters with identical pronunciation, as explained in Table 6-4.

Table 6-3 The regular spelling and irregular spelling of the initial consonant letters with identical pronunciation

Pronunciation initially	Regular spelling	Irregular spelling
/k ^h /	ค	ข
/t ^h /	ช	ฉ
/d/	ด	ฎ
/t/	ต	ฏ
/t ^h /	ถ	ฐ
/t ^h /	ท	ธ ฑ ฒ
/p ^h /	พ	ภ
/s/	ส	ศ ษ
/n/	น	ณ
/j/	ย	ญ
/l/	ล	ฬ

Among the spelling errors committed by Lao students, they tended to use regular spelling to replace irregular spelling. For example, in the misspelled words *<เสร์้าโคก>, *<โคสนา>, *<พาสา>, *<ปติเสธ>, *<กรกดาคม>, *<พีนถาน>, *<กรรนา>, and *<อนุยาด>, the irregular spellings of /s/, /k^h/, /p^h/, /t/, /d/, /t^h/, /n/, and /j/ sounds were replaced by their regular counterparts in Table 6-5. The substitution of the regular spelling for irregular spelling coincides very well with the Lao spelling system. At the same time, the substitution of irregular spelling for regular spelling was also found but with a

relatively small percentage, such as *<ลำไส้> for <ลำไส้> /lamsâj/ ‘intestine’, which reflects that Lao students realize that there is some irregular initial consonant spelling in the Thai writing system.

Similar spelling errors were found in final consonant letters as well. Lao students substituted a large number of final consonant letters with their homophonic counterparts. Moreover, they tended to simplify the multiple options of final consonant sounds /t/, /k/, /p/, and /n/ into <ต>, <ก>, <บ>, and <น> respectively, such as *<ประเทศ> for <ประเทศ> /pràt^hè:t/ ‘country’, *<สามัคคี> for <สามัคคี> /sāmákk^hi:/ ‘harmony’, *<ทวีป> for <ทวีป> /t^háwí:p/ ‘continent’, and *<รำคาญ> for <รำคาญ> /ramk^ha:n/ ‘to be annoyed’. On the other hand, the spelling errors like *<ทรมาร> for <ทรมาน> /t^hw:rámá:n/ ‘torture’ also existed among Lao students, which demonstrates that Lao students not only simplified irregular letters into regular ones, they also made errors when the final consonant sounds are represented by regular letters.

6.3.1.2 The existence of unpronounced letters

Unpronounced letters are another complexity in the Thai writing system, which cannot be seen in the Lao Language. Compared to the Thai language, the Lao orthography has become much more phonetical since the reform in recent decades. The spelling of Lao is almost the perfect representation of sounds. Since unpronounced letters do not exist in Lao, Lao students have big problems when dealing with them, so that the errors including omission, substitution, and insertion of unpronounced letters were frequently seen. Either consonant letters with a sound-killing marker or without a sound-killing marker might be omitted by Lao students as shown in the errors *<โทรทัศน์> for <โทรทัศน์> /t^ho:rát^hát/ ‘television’ and *<สามารถ> for <สามารถ> /sǎ:mâ:t/ ‘can’ for instance. The unpronounced vowel letters were also likely to be omitted, such as *<ธาตุ> for <ธาตุ> /t^hà:t/ ‘element’. At the same time, substitution and omission of unpronounced letters were also found, and they mostly occurred to consonant letters with a sound-killing marker, such as *<สร้างสรรค์> for <สร้างสรรค์> /sâ:rsǎn/ ‘create’ or *<ผูกพัน> for <ผูกพัน> /p^hù:kp^han/ ‘relations’.

6.3.1.3 False initial consonant clusters

When dealing with some false clusters in Thai, <สร> /s/, <ศร> /s/, and <จร> /tɕ/ for instance, Lao students tended to omit the second consonant letter in those clusters. The spelling errors like *<เต้าโตก> for <เศร้าย่ำโตก> /sâusò:k/ ‘depressed’, *<โคร่งสั่ง> for <โครงสร้าง> /kʰro:ŋsâ:ŋ/ ‘structure’, or *<จิง> for <จริง> /tɕiŋ/ ‘real’ were recorded from Lao students. Additionally, the consonant cluster <ทร> /s/ also caused many substitution errors. Many Lao students tended to substitute <ซ> /s/ for <ทร> /s/. The spelling errors such as *<ชาย> for <ทราย> /saj/ ‘sand’ and *<ซบสิน> for <ทรัพย์สิน> /sâpsin/ ‘asset’ are very common among Lao students’ spelling errors.

6.3.2 The differences between the Lao and Thai writing system

As members of Tai-Kadai family, Lao and Thai share many similarities in terms of writing system. Being alphabetic languages, spelling of both Thai and Lao is based on sounds. Additionally, scripts of both Lao and Thai were adapted from the old Khmer scripts, which was the southern Brahmic style of writing derived from the south Indian Pallava alphabets (Danvivathana 1981, Lew 2014), so the two languages have many shared letters, even if the way of writing differs slightly from one another.

In spite of the similarities shared by Lao and Thai, there are also differences between the two languages’ writing system. One of the biggest differences is the orthographic transparency of the two languages. According to Diller (1996), Thai has kept more color of Pali and Sanskrit whereas Lao has been simplified several times in recent decades. Numerous graphemes have been eliminated in Lao, such that the current orthography is nearly a perfect phonological representation. Besides the different transparency of the Thai and Lao orthography, there are also some slight distinctions between the Lao scripts and Thai scripts. Moreover, some particular words have different ways of spelling in Thai and Lao.

6.3.2.1 The different transparency of the Lao and Thai orthography

Compared to Thai writing system, the transparency of the Lao orthography is relatively high, which means that there exist almost one-to-one correspondences between phonemes and graphemes. The consistent correspondences between sounds and letters in Lao caused Lao students to use sound-out strategy when spelling Thai, which means that Lao students simply spell Thai words according to their pronunciation

without considering various complex forms in Thai. It made Lao students insert many redundant vowel letters or initial consonant letters when spelling Thai. Insertion of vowel letters such as *<คนะบอดี> for <คนบดี> /kʰánábo:di:/ ‘dean’, *<โทรทัศน์> for <โทรทัศน์> /tʰo:rátʰát/ ‘television’, or *<ทอรฆมาน> for <ทรมาน> /tʰo:ráma:n/ ‘torture’ is very common among Lao students. In addition, the insertion of initial consonant letters such as *<สะพาน> for <สนาม> /sàná:m/ ‘yard’, *<อัย> for <ยัง> /jan/ ‘still’, and *<ขนม> for <ขนม> /kʰànǒm/ ‘sweets’ were massively found as well.

On the other hand, the combination of misaligned vowel letters and consonant clusters in Lao is not so obscure as in Thai. For example, part of the vowel <เีย> /ia/ in Thai has to be put before initial consonants, such as <เรียน> /rian/ ‘study’, in which speech and spelling do not correspond. However, there is a vowel <ຽ> to represent /ia/ sound in Lao, such as <ຽນ> /hian/ ‘study’, in which speech and spelling correspond well. It can be seen that the mismatch between sound and speech in Lao is reduced to some extent. Therefore, when spelling the words like <เฉพาะ> /tɕʰàpʰɔ:/ ‘specifically’, <เผชิญ> /pʰàtɕʰɔ:n/ ‘confront’, and <แสดง> /sàdɛ:ŋ/ ‘show’, Lao students tended to ignore the mismatch between spelling and speech and misspelled them into *<สะเพาะ>, *<พะเชิญ> or *<ปะเซ็น>, and *<สะแดง> respectively, which can be seen from Table 6-5 that the correspondence between spelling and speech in Lao is higher than Thai when the consonant clusters combine with misaligned vowel letters.

Table 6-4 Comparison between Thai and Lao in combination between consonant clusters and misaligned vowel letters

Thai words	Lao words	Misspelled words	Meaning
เฉพาะ /tɕʰàpʰɔ:/	สะเพาะ	*สะเพาะ	specifically
เผชิญ /pʰàtɕʰɔ:n/	ปะเซ็น	*พะเชิญ, *ปะเซ็น	confront
แสดง /sàdɛ:ŋ/	สะแดง	*สะแดง	show

6.3.2.2 The differences between the Lao scripts and Thai scripts

Generally speaking, Lao scripts are more curved and rounded compared to Thai scripts. Some alphabets, including both vowel letters and consonant letters, feature a different way of writing as shown in Figure 6-4.

Thai Proverb

อายครูไม่รู้วิชา อายภรรยาไม่มีบุตร

ʔaaj kʰruu mǎj rǔu wí.tɕʰaa ʔaaj pʰan.ra.jaa mǎj mii bùt
 gloss: shy-teacher-no-know-knowledge shy-wife-no-have-son

If you're shy with your teacher, you won't gain knowledge;
 If you're shy with your wife, you won't have kids.

Lao Proverb

ອາຍຄູ່ບໍ່ໄດ້ຄວາມຮູ້ ອາຍຊູ່ບໍ່ໄດ້ເມຍ

(อายครูไม่ได้รับความรู้ อายผู้หญิงไม่ได้เมีย)
 ຊູ່ = ຄນຮັກ

ʔǎj kʰúu bɔɔ dǎj kʰám hǐn ʔǎj sǐn bɔɔ dǎj mǎi
 gloss: shy-teacher-no-obtain-knowledge shy-lover-no-obtain-wife

If you're shy with your teacher, you won't gain knowledge;
 If you're shy with your crush, you won't have a wife.

Figure 6-4 Comparison between the Thai scripts and Lao scripts (Muller 2014)

The complete comparison of scripts of Lao and Thai is shown in Table 6-6. Even though the two languages share many letters, there are still some slight differences between them, such as the vowel <ัว> and <ົວ>, <เ-า> or <ົາ> in Thai and Lao respectively, which are similar but slightly different.

Table 6-5 The comparison between Thai letters and Lao letters

Consonant letters			Vowel letters		
IPA	Thai letters	Lao letters	IPA	Thai letters	Lao letters
/k/	ก	ກ	/a/	-ะ	-ະ
/kʰ/	ข ค ฆ	ຂ ຄ	/a:/	-า	-າ
/ŋ/	ง	ງ	/e/	เ-ะ	เ-ະ
/tɕ/	จ	ຈ	/e:/	เ-	เ-
/tɕʰ/	ฉ ช ฌ	--	/ɛ/	แ-ะ	แ-ະ
/s/	ซ ศ ษ ส	ສ	/ɛ:/	แ-	แ-
/j/	ญ ย	ຍ	/i/	ิ	ົ
/d/	ฎ ด	ດ	/i:/	ี	ົ
/t/	ฏ ต	ຕ	/ɔ/	เ-าะ	เ-າະ
/tʰ/	ฐ ถ ท ฑ ฒ	ທ	/ɔ:/	-อ	อ
/n/	ณ น	ນ	/u/	ุ	ຸ
/b/	บ	ບ	/u:/	ู	ູ
/p/	ป	ປ	/ʉ/	ึ	ື
/pʰ/	ผ พ ภ	ຜ ພ	/ʉ:/	ื	ື
/f/	ฝ ฟ	ຝ ຟ	/ɤ:/	เ-อ	เ-ົ
/m/	ม	ມ	/o/	โ-ะ	โ-ະ
/r/	ร	ຣ	/o:/	โ-	โ-

Consonant letters			Vowel letters		
/l/	ล ฟ	ລ	/ia/	เีย เียะ	เียะ เียะ
/w/	ว	ວ	/uaʔ/	ัว ัวะ	ัวะ ัวะ
/h/	ห ฮ	ຫ ຮ	/ua/	เือ เือะ	เือะ เือะ
/ʔ/	อ	ອ	/aj/	ไ-ไ-	ไ-ไ-
/ŋ/	-	ຍ	/au/	เา	เา

Three types of spelling errors could be traced back to the differences between scripts of the two languages: 1) substituting Lao vowel letters for Thai vowel letters; 2) substituting long vowel letters for short vowel letters and vice versa; 3) substituting one initial consonant with another one.

Firstly, some Lao students misemployed some Lao vowel letters when spelling Thai. Secondly, they were not clear about the correct way of writing some Thai vowel letters due to the differences between the two languages in terms of scripts. They mainly confused about the differences between the two pairs of short and long vowel letters: <็> /i/ and <ื> /i:/, <ึ> /u/ and <ือ> /u:/, so that they substituted short for long ones and vice versa. Such spelling errors like *<อึ> for <อื> /ʔi:k/ ‘again’ and *<ซึ่ง> for <ซึ่ง> /sɯŋ/ ‘which’ were caused by the unclearness of Lao students in those vowels. Finally, some consonant letters with similar form also caused misemployment among Lao students. They blended <น> /n/ and <ม> /m/, <ค> /kʰ/ and <ศ> /s/, or <ด> /d/ and <ก> /kʰ/, in their writing, such as *<ม้ก> for <น้ก> /nák/ ‘extremely’, *<นคร> for <นคร> /nákʰɔ:n/ ‘city’, and *<คั้งนั้น> for <ดังนั้น> /danǰán/ ‘therefore’.

6.3.2.3 The differences between the Lao and Thai in initial consonant clusters

Lao does not have various initial consonant clusters as Thai does. There are <ກວ>, <ຈວ>, <ອວ>, <ຊວ>, <ຄວ>, <ທວ>, <ລວ>, <ງວ>, <ຮວ>, <ຫງ>, <ຖວ>, <ສວ>, <ຂວ>, <ຫນ>, <ຫມ>, and <ຫລ> used as initial consonant clusters and some of them are always written as one connected letter: <ຫນ> referring to <ຫນ>, <ຫມ> referring to <ຫມ>, and <ຫລ> referring to <ຫລ>. The unfamiliarity of Lao students in Thai initial consonant clusters made them commit some spelling errors when writing tone markers and some vowel letters which need to be put above initial consonant clusters. In Thai, when some vowel letters and tone markers are spelled with initial consonant clusters, they should be put above the second consonant letter, such as <เครียด> /kʰrɯ́at/ ‘worried’

and <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’. Lao students are likely to put them in the first consonant letter of the consonant clusters. It can be seen from the following spelling errors: *<เค็รียด> for <เค็รียด> /k^hriat/ ‘worried’, *<ทรัพย์สิน> for <ทรัพย์สิน> /sápsǐn/ ‘asset’, *<แหล่ง> for <แหล่ง> /lɛ:ŋ/ ‘source’, and *<สร้างสรร> for <สร้างสรรค์> /sâ:ŋsǎn/ ‘create’.

6.3.2.4 The differences between Thai and Lao in spelling some certain words

The differences between Lao and Thai writing system also reflect in different ways of spelling some particular words. For example, the word <ปัจจุบัน> /pàttɕùban/ ‘present’ in Thai is spelled as <ปะจุบัน> in Lao, which caused Lao students to commit the error like *<ปัจจุบัน> and *<ปะจุบัน>, in which the final consonant letters <จ> was omitted.

6.3.3 The interference from the Lao phonological system

The interference from the Lao phonological system is another main cause of the spelling errors made by Lao students. Either the influence from Lao tone system or some Thai phonemes which are absent from Lao phonology are transferred into Lao students’ Thai spelling.

6.3.3.1 Interference from the Lao tone system

There are many dialects in spoken Lao, including the Vientiane Lao, Northern Lao, Northeastern Lao, Central Lao, Southern Lao, and Western Lao (Enfield 2007). These dialects differ from one another in terms of vowel length, vocabularies and tones. Among the various dialects, the Vientiane dialect is considered as the official language of Laos. Since the Vientiane Lao owns the official position and all the thirty Lao participants speak the Vientiane Lao as their mother tongue, the following discussion will focus on the tone system of the Vientiane Lao. Even within the Vientiane Lao, it is controversial to claim whether there are five or six tones and what they are. According to Higbie and Thinsan (n.d.), there are two main statements: a group of people thinks there are six tones; namely, mid tone, low tone, high falling tone, low falling tone, high tone, and rising tone. On the other hand, another group of people believes that the low tone is actually the same tone as the rising tone, so there should be five tones in the Vientiane Lao.

Four types of spelling errors in tones are caused by the interference from Lao tone system. The first type is the substitution of falling tone marker <◌̎> /májɿ̎w:/ for low tone marker <◌̎> /májɿ̎k/, such as *<แน่นแพ้น> for <แน่นแพ้น> /nɛ̎:nfɛ̎:n/ ‘firm’, *<เนิ่นนาน> for <เนิ่นนาน> /nɿ̎:nna:n/ ‘long time’, and *<คล่องแคล่ว> for <คล่องแคล่ว> /kʰlɔ̎:ŋkʰlɛ̎:u/ ‘quickly’. As shown in Figure 5-5, in Lao tone system, if there is a low tone marker <◌̎>, the tone value will be mid tone; likewise, if there is a falling tone marker <◌̎>, the tone value is either low falling or low falling tone. It is obvious that tone value is consistent to tone maker in the Lao language. Due to the interference from Lao tone system, Lao students tended to use falling tone marker to represent falling sound, which caused the substitution of <◌̎> for <◌̎>.

final sound or tone marker ◌̎ p first consonant of word	Final sound of the word is unstopped: the word ends with a nasal sound (m, n, ng) or with an unstopped vowel sound.	Final sound of the word is stopped, vowel length is short. (The word ends with a stopped consonant or vowel sound.)	Final sound of the word is stopped, vowel length is long. (The word ends with a stopped consonant; there are no long, stopped vowels.)	any word with the first tone marker 	any word with the second tone marker ◌̎
high consonants ฝ ฝ ฝ ฝ ข ข	rising	high	low falling	mid	low falling
mid consonants ฉ ฝ ฝ ฝ ข ฝ ฝ ฝ	rising (or "low" – this tone is controversial)	high	low falling	mid	high falling
low consonants ฝ ฝ ฝ ฝ ข ฝ ฝ ฝ ข ฝ ฝ ฝ	high	mid	high falling	mid	high falling

Figure 6-5 Lao tone chart (Higbie and Thinsan n.d.)

Secondly, Lao students might insert or omit the low tone marker when spelling some Thai words. As illustrated in Figure 6-5, low tone marker in Lao directly indicates the mid tone within all three-class consonants. However, the mid tone in Thai has no marker indication. As a result, low marker <◌̎> was inserted or omitted due to the interference of Lao tone system as seen from the errors like *<ตั้งนั้น> for <ตั้งนั้น> /daj̎nán/ ‘therefore’.

Thirdly, it can be seen from Figure 6-5 that when the initial consonant of a word is low consonant and the final sound is unstopped, the tone value of the word will be high. However, apart from the low initial consonant and unstopped final sound, there still needs a falling tone marker to indicate a high tone in Thai tone system. Because of this, falling tone marker was omitted by Lao students when they were used in low-class initial consonant open syllables, such as *<ทั้ง> for <ทั้ง> /t^hǎŋ/ ‘whole’.

Finally, the differences between Lao tone system and Thai system might cause ambiguity among Lao students in their Thai spelling. Consequently, other spelling errors in tones were also found, for example, *<โดดเด่น> for <โดดเด่น> /dò:tdè:n/ ‘outstanding’, *<เศร้าโศก> for <เศร้าโศก> /sǎu:sò:k/ ‘depressed’, and *<ประตู> for <ประตู> /prà:tu:/ ‘door’.

6.3.3.2 The absence of most of true clusters in Lao phonological system

Lao does not have various true clusters compared to Thai since the old grapheme clusters formed with /l/ or /r/ have been eliminated (Enfield 2007). The absence of most of true clusters in Lao phonological system made Lao students commit many spelling errors in Thai true clusters, including both omitting the second consonant letter of a true cluster and inserting a consonant letter to manufacture a true cluster.

Due to the fact that clusters formed with /l/ or /r/ have been eliminated from Lao phonological system, Lao students tended to omit the second consonant in clusters, as can be seen from the errors *<แลกเปลี่ยน> for <แลกเปลี่ยน> /lɛ:kplian/ ‘exchange’, *<เครื่องมือ> for <เครื่องมือ> /k^hruǎŋmu:/ ‘tool’, *<กลาง> for <กลาง> /kla:ŋ/ ‘middle’, and *<ประชาชน> for <ประชาชน> /prà:t^ha:t^hon/ ‘people’. Additionally, when some Thai words do not contain a cluster, Lao students were also likely to insert an abundant consonant letter to form a true cluster. For example, in the spelling errors *<เบียร์>, *<องกราน>, and *<รำคราน>, a needless <ร> /r/ was inserted in the word <เบียร์> /bia/ ‘beer’, <องค์กร> /ʋoŋka:n/ ‘organization’, and <รำคาญ> /ram^ha:n/ ‘to be annoyed’.

6.3.3.3 The absence of /r/ sound in the Lao phonological system

According to Lew (2014), /r/ sound, which is represented by the consonant letter <ร>, was eliminated from Lao phonological system after the orthography reform in 1967. Therefore, Lao students were not clear when they encountered the /l/ and /r/ sounds

in the Thai language. As a result, they either substituted <ล> /l/ for <ร> /r/ or substituted <ร> /r/ for <ล> /l/, such as *<บลีกัน> for <บริการ> /bɔːrika:n/ ‘service’, *<ครอบครัว> for <ครอบครัว> /kʰrɔːpkʰrua/ ‘family’, *<ลำคาร> for <รำคาญ> /ramkʰa:n/ ‘be annoyed’, and *<แลกเปเรียน> for <แลกเปลี่ยน> /lɛːkplian/ ‘exchange’.

6.3.3.4 The absence of /tɕʰ/ sounds in the Lao phonological system

The absence of /tɕʰ/ sound also causes Lao students to blend initial consonant letters <ทร>, <ซ> /s/ and <ช> /tɕʰ/. They either substituted <ซ> /s/ for <ช> /tɕʰ/ and vice versa as shown in the spelling errors such as *<เซ่น> for <เช่น> /tɕʰɛːn/ ‘such as’, *<ชาว> for <ชาว> /tɕʰaːu/ ‘resident’, * <มอเตอร์ไซ> for <มอเตอร์ไซด์> /mɔːtɕʰsaj/ ‘motorcycle’, and *<แซกแซง> for <แทรกแซง> /sɛːksɛːŋ/ ‘intervene’.

6.3.4 Idiosyncratic spelling errors

Some idiosyncratic errors are also found among Lao students. They omitted some parts when spelling Thai, which could be either vowel letters or consonant letters, as displayed in Table 6-7. The last column of the table provides the Lao version of these words in order to explain that the spelling errors were not caused by the differences between Thai and Lao.

Table 6-6 Idiosyncratic spelling errors made by Lao students

Misspelled words	Correct words	Meaning	Lao words
*สามัคคี	สามัคคี /sǎ:mákkʰiː/	harmony	สามัคคี
*ผูกพัน	ผูกพัน /pʰuːkpʰan/	commit	ผูกพัน
*อุตสาหกรรม	อุตสาหกรรม /ʉtsǎ:hákam/	industry	อุตสาหกรรม

In summary, as illustrated in Table 6-8, complexity of the Thai writing system is the biggest cause of the spelling errors made by Lao students, resulting in 60.5 percent of the errors. Differences between the Lao and Thai writing system and interference from the Lao phonological system are another two main causes, which brought about 22.2 percent and 16.9 percent of the spelling errors, respectively.

Table 6-7 Causes of spelling errors made by Lao students

Causes	Frequency	Percentage
Complexity of the Thai writing system	1016	60.5%
Differences between the Lao and Thai writing system	373	22.2%
Interference from the Lao phonological system	284	16.9%
Idiosyncratic spelling errors	6	0.4%
Total	1679	100%

6.4 Comparison of causes of spelling errors made by Chinese and Lao students

Causes of spelling errors made by Chinese and Lao students have been discussed respectively in the preceding sections. The following two sections will focus on the comparison of causes of the spelling errors made by Chinese and Lao students, including both similarities and differences.

6.4.1 Similarities of causes of the spelling errors made by Chinese and Lao students

Basically speaking, causes of the spelling errors made by Chinese and Lao students are similar; namely, complexity of the Thai writing system, interference from students' native language, and differences between the writing system of Thai and students' native language.

Among all the causes, complexity of the Thai writing system caused the most spelling errors in both Chinese and Lao students. The percentage of the spelling errors caused by the complexity in Thai of the two groups of students are very close, which account for 61.1 percent and 60.5 percent of the spelling errors made by Chinese and Lao students, respectively. All the homophonic letters, unpronounced letters, and various initial consonant clusters caused spelling errors among Chinese and Lao students.

In addition, the percentage of the spelling errors related to students' native language is also close in both Chinese and Lao students. The spelling errors related to students' native language include the errors caused by the interference from students' native language and the differences in writing system of students' native language and Thai,

which caused 38.4 percent and 39.1 percent of all the spelling errors among Chinese and Lao students respectively.

6.4.2 Differences of causes of the spelling errors made by Chinese and Lao students

6.4.2.1 Different acquisition ways of Thai of Chinese and Lao students

In the present study, Lao students made as approximate twice spelling errors as Chinese students. The reason why Lao students made more spelling errors might be that the different degree of using Thai between Chinese and Lao students. As presented in 3.2.1 and 3.2.2, the degree of using Thai of Chinese and Lao students is relatively close in terms of speaking, reading, and listening; however, the degree in writing Thai of Lao students is much lower than Chinese students as illustrated in Figure 6-6. For Chinese students, the degree is ‘almost quite regularly’ whereas Lao students write Thai ‘occasionally’.

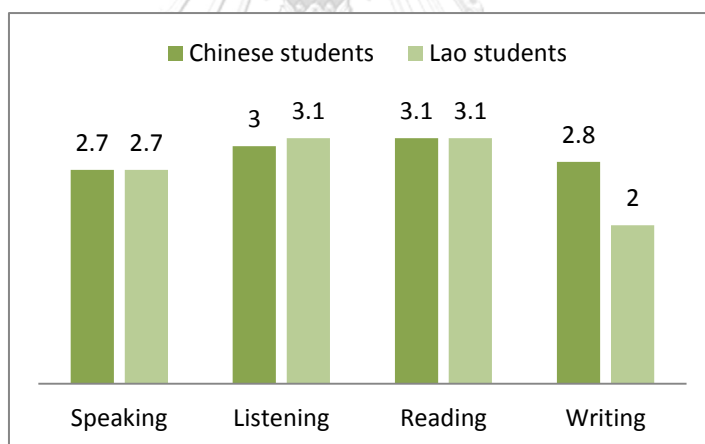


Figure 6-6 Comparison of degree of using Thai of Chinese and Lao students

Obviously, Chinese students have more opportunities to write Thai compared to Lao students, which enhances their Thai writing skill. Chinese students learn Thai under highly structured classrooms, which mean that they have experienced instructors and suitable educational materials to help them improve their Thai language skills in a full range. They have almost equal chances to practice their speaking, listening, reading, and writing in Thai, which might be the main factor to help them to perform better in Thai spelling. On the other hand, the acquisition of the Thai language among Lao students is in a more natural way, which might help Lao students to have a more

natural accent or get to know more vocabularies that used by native speakers but it will not be able to provide them professional training and guidance related to the Thai language spelling. As been explained throughout this chapter, the Thai language has many complex forms and its orthography is not shallow as expected; therefore, it needs professional guidance and plenty of practice in order to achieve a certain degree of spelling, which might explain why Lao students made as nearly twice as spelling errors than Chinese students.

6.4.2.2 The percentage of the spelling errors related to differences in writing system of students' native language and Thai

The errors caused by differences between the writing system of students' native language and Thai could be found among both Chinese and Lao students; however, the percentage of the errors caused by those differences varies greatly, in which the differences between Chinese and Thai writing system only brought about 0.6 percent of the errors among Chinese students while more than twenty percent of the spelling errors made by Lao students could be traced back to the differences between Lao and Thai writing system. As explained in 6.2.4, writing system of Chinese and Thai differs fundamentally: one is a logographic language, the other is alphabetic. Due to the great differences between the two languages' writing system, Chinese students can get rid of the interference from their mother tongue to some extent, so it is not possible to extensively blend or mix up between the writing system of the two languages; therefore, the spelling errors caused by the differences between Chinese and Thai writing system hold an extremely small number. They only made negligible errors due to unfamiliarity with Thai writing system, such as *<ศัพท์> for <ศัพท์> /sàp/ 'vocabulary' and *<เคย> for <เคย> /k^hɔ:j/ 'ever'. On the other hand, Lao and Thai have a high-degree linguistic proximity, which might help Lao students master Thai more easily than the students speaking other languages. However, the close linguistic distance between Lao and Thai makes Lao students confuse the slight differences between the two languages. They are strongly influenced by their mother tongue when spelling Thai. As a result, they made a large number of spelling errors because of the differences of Lao and Thai writing system.

6.4.2.3 The influence of Thai native speakers

The influence from Thai native speakers could be found among Chinese students as can be seen from the errors such as *<ก้อ> for <ก็> /kô:/ ‘also’ or *<อยู่> for <อยู่> /jù:/ ‘exist’, but similar errors were never found among Lao students. It is probably because Lao students are able to distinguish the vocabularies used in formal and informal situations so that they could avoid those informal spelling when writing formal content.

6.5 Summary

This chapter presents the possible causes of the spelling errors made by different groups of students. Complexity of the Thai writing system caused most of the spelling errors of Thai students and slips of the pen could also be found with a small number. Among Chinese students, two main causes of the errors are to blame, which are complexity in the Thai language and interference from Chinese phonological system. Apart from that, differences between Chinese and Thai writing system, and influence from native speakers of Thai are also the causes that should be taken into consideration because some scattered errors could be traced back to those causes. Lao students made the most spelling errors among the three groups of students, which mainly resulted from complexity of Thai, differences between Lao and Thai writing system, and interference from Lao phonological system.

Moreover, the causes of the errors made by different groups of students are compared with one another. Both similarities and differences are noticed. Both Chinese and Lao students made the most spelling errors because of some complex forms in the Thai language. The percentage of the errors related to students’ native language is very close as well. In terms of differences in causes of spelling errors, the different acquisition ways of the Thai language between Chinese and Lao students caused Lao students to make as twice as spelling errors than Chinese students. The role of the writing system of students’ native language is also different between Chinese and Lao students: the differences between Lao and Thai writing system caused much more errors among Lao students due to the linguistic proximity between

Lao and Thai; however, differences between Chinese and Thai writing system seem not to play the main role in Chinese students' Thai spelling and only a few errors could be traced back to those differences.

In the next chapter, summary and conclusion of the present study will be provided. Further to this, some pedagogical implications derived from the present study will be discussed as well. Finally, some suggestions for further studies will also be mentioned.



Chapter 7 Conclusion

This chapter presents the summary and discussion of the study. It also includes some pedagogical implications of the findings and suggestions for further studies.

7.1 Summary

The initial attempt of the study evolved from the fact that spelling errors in foreign languages actually received little attention from foreign language learners, teachers and scholars. They have been simply treated as carelessness of writers. On the contrary, spelling errors do deserve much attention because they reflect the unsolved problems in teaching and learning the target languages. The Thai language is definitely a good case to study in terms of spelling because it has various complicated orthographic features that might cause spelling errors. Through a review of past studies, I found that there were very few research works dealing with spelling errors in Thai made by foreign learners.

In order to fill this research gap, this study aims to analyze the patterns of spelling errors in Thai made by Chinese and Lao students speaking Thai as a foreign language and examine what factors cause the errors. The study hypothesized that both Chinese and Lao students made similar spelling errors in writing vowels, consonants and tone markers in Thai and that the errors were caused by three main factors, i.e., complexity of the Thai writing system, interference from students' native languages, and differences between the Thai writing system and the Chinese or Lao writing system. It is also hypothesized that Lao students made more spelling errors than Chinese students. Because unlike the Chinese, Lao students did not study Thai in classrooms and thus lacked training in writing Thai.

Data was collected from thirty Chinese students, thirty Lao students and thirty Thai students. They were asked to write a composition on a fixed topic and writing words to dictation. All the handwritings written by the participants were examined with the criterion that all the deviations from the Royal Institution Dictionary (2011) were identified as spelling errors. Totally, 2,689 spelling errors were found. All of them were

classified into different types of errors. The analysis of their frequencies shows that of all the errors, 30.8 percent (highest) are errors in initial consonants, followed by vowels (20.8 percent), final consonants (23.1 percent), unpronounced letters (14.4 percent), tone markers (3.1 percent), and other spelling errors (0.6 percent). All of these are done in several ways of alphabetical arrangement; i.e., substitution, omission, insertion and misplacement.

It is found that Chinese students and Laos students are different in their spelling errors. Generally, Lao students' errors (1,679 errors) are twice as many as that of Chinese students (859 errors). Lao students have more problems in spelling Thai consonants, including both initial and final consonants, such as *<ลำไส้> for <ลำไส้> /lamsâj/ 'intestine', *<บดบาด> for <บทบาท> /bòtbà:t/ 'role'; while Chinese students tend to commit more spelling errors in Thai vowels, such as *<กงสุล> for <กงสุล> /kɔŋsǔn/ 'consul', *<ทอรมาน> for <ทรมาน> /t'w:rámɑ:n/ 'torture'. In terms of alphabetic arrangement of misspelled words, the type of substitution is the most common type in both Chinese and Lao students. Concerning the difference, it is found that Lao students tend to insert more letters, such as *<คนะบอดี> for <คนบดี> /k'ánábɔ:di:/; while Chinese students are more likely to omit necessary letters. Moreover, the type of misplacement, such as *<เคีรียด> for <เคีรียด> /k'íriat/ 'worried' and *<แหล่ง> for <แหล่ง> /lɛ:ŋ/ 'source', is only found among Lao students.

Regarding the frequency of each type of errors, Chinese students made mistakes most in writing Thai vowels (37.5 percent), followed by initial consonants (20.7 percent), final consonants (20.4 percent), unpronounced letters (18.0 percent), tone markers (2.2 percent), and other errors (1.2 percent). Concerning alphabetic arrangement of misspelled words, substitution, such as *<กงสุล> for <กงสุล> /kɔŋsǔn/ 'consul', *<ลำไส้> for <ลำไส้> /lamsâj/ 'intestine', occupies a predominant percentage of all the Chinese' spelling errors, then omission and insertion. As for Lao students, they committed more spelling errors in writing Thai consonants, including both initial and final consonants, which account for 35.8 and 24.3 percent of all errors respectively. The third in the rank is the type of errors in vowels (23.6 percent), followed by unpronounced letters (12.6 percent), tone markers (3.4 percent), and others (0.3%).

The same as Chinese students, substitution is also the most common errors made by Lao students, then insertion, omission and misplacement.

The results of the analysis of the causes of the spelling errors show that complexity in the Thai language is the biggest cause of the spelling errors made by both Chinese and Lao students, which include homophonic letters, unpronounced letters, various initial consonant clusters, etc. Moreover, the Chinese and Lao phonological systems also play an important role in causing the errors. Chinese students made 324 errors due to their dialects and some differences between the Chinese and Thai phonology, such as *<ชัยชละ> for <ชัยชนะ> /tɕʰajtɕʰáná/ ‘victory’, *<สัมพันธ์> for <สัมพันธ์> /sǎmpʰan/ ‘relations’, or *<ประสบการณ์> for <ประสบการณ์> /pràsòpka:n/ ‘experience’. Likewise, Lao students’ errors also reflect some characteristics of the Lao phonological system, such as *<เช่น> for <เช่น> /tɕʰè:n/ ‘such as’ or *<ประชาชน> for <ประชาชน> /pràtɕʰa:tɕʰon/ ‘people’. Concerning the influence of the learner’s writing system, it is found that the Chinese writing system seems to have very little effect on the Chinese students concerning their spelling errors. They made very few mistakes, such as *<เคย> for <เคย> /kʰɔ:j/ ‘ever’ and *<ศัพท์> for <ศัพท์> /sàp/ ‘vocabulary’, which reveal that they are not familiar with alphabetic writing system since Chinese is a logographic language. By contrast, the findings show that the Lao writing system has strong effect on the Lao students’ writing Thai words. Indeed, 373 spelling errors (22.2 percent) made by Lao students are related to the Lao orthography, for example, *<สนาม> for <สนาม> /sàná:m/ ‘yard’ and *<เฉพาะ> for <เฉพาะ> /tɕʰàpʰɔ́/ ‘specifically’. Finally, Chinese students also tend to imitate the way that Thai native speakers spell some words. The imitation brought about several spelling errors among them while Lao students did not produce this type of errors.

7.2 Discussion

7.2.1 Correct spelling needs to be learned formally

This study provides an interesting finding; i.e., that Lao students, whose native language is very similar to Thai in all aspects including the writing system, made more mistakes in spelling Thai words than Chinese students. Actually, it is generally accepted

that Lao people definitely have a high level of proficiency in speaking, reading, and listening to Thai; however, their spelling ability is far from their proficiency in other skills. They tend to substitute Lao letters for Thai letters, which might pose a barrier for the readers who know neither Thai or Lao. This leads to a conclusion that spelling should not be overlooked in foreign language teaching and that to be able to spell words in a foreign language correctly, one needs to learn it formally or practice it seriously.

7.2.2 Intralingual errors versus interlingual errors

Generally, errors in foreign languages are roughly classified into two major types: intralingual errors, which refer to the errors caused by the target languages themselves; and interlingual errors or the errors caused by the interference from learners' native languages. As mentioned in 2.2.2 and 2.2.3, the findings of many studies show a tendency that foreign language learners tend to make more intralingual errors than interlingual ones (Arndt and Foorman 2010, Kim 2001, Sattayatham and Honsa 2007). The findings of the present study accord with the tendency. The intralingual errors in Thai made by Chinese and Lao students are those caused by complexity in the Thai language, which occupy 61.1 percent and 60.5 percent, respectively. The interlingual errors or those resulting from the interference of students' native languages in both phonology and orthography hold 38.4 percent and 39.1 percent. By comparison, intralingual errors account for the majority of the spelling errors made by both Chinese and Lao students.

7.2.3 The linguistic distance between the target language and native language of learners

Some scholars claim that learners will get benefit from their native language when learning another foreign language which shares the same writing system with their native language (Schwartz et al. 2007). For example, Vietnamese EFL learners have an advantage over Chinese EFL learners because both English and Vietnamese are alphabetic languages (Holm and Dodd 1996). However, the findings of the present study do not support this. The Lao language has the same writing system as Thai; i.e., spoken language is represented by alphabet letters; however, the alphabetic system of

the Lao language does not help Lao students to make fewer spelling errors than Chinese students, whose native language is logographic.

On the contrary, it is because those similar orthographic rules shared by Lao and Thai that cause Lao students to commit more spelling errors when writing Thai. They are strongly influenced by their mother tongue when spelling Thai so that they made a large number of spelling errors which reflect many orthographic rules of the Lao language. This is accordant with the findings of the study conducted by Russak and Frangman (2014), which shows that Hebrew and Arabic have very high linguistic proximity but those close points further become the factors that cause Hebrew people to misspell Arabic. The most obvious difference between the Lao and Thai writing systems is the level of orthographic transparency. The Lao language is much simpler and more straightforward than Thai, so Lao students tend to use sound-out strategy when spelling Thai. It is also proved by Durgunoğlu (2002) and Fashola et al. (1996) in the studies that deal with the spelling errors in English made by Spanish students. Spanish students also simply spell English words according to the pronunciation, as Spanish has almost one-to-one correspondence between sounds and spelling.

It can be claimed that the linguistic distance between the target language and native language of learners plays an important role in foreign language spelling. Sometimes a close distance provides some help for learners; however, it is not always a favorable factor as can be seen from Lao people spelling Thai and Spanish people spelling English. Whether a close or far linguistic distance will help or hinder foreign language acquisition, I think it needs to be judged according to different conditions.

7.3 Pedagogical implications

The findings of the present study provide some pedagogical implications. First, various causes of spelling errors found in this study reflect the difficulty of students of different native languages when learning Thai. Therefore, spelling errors should be viewed as a serious matter rather than simply treated as slips of the pen. As has been claimed by Corder (1967), spelling errors provide abundant information of the process

of learning the target language to learners, teachers, and researchers and also important feedback of learning; therefore, they should be identified and explained in order to find out the way to improve learners' spelling skills.

Secondly, this study finds that complexity of the Thai writing system, such as homophonic letters and unpronounced letters, is the main cause of spelling errors among foreign students; therefore, they should be emphasized in the process of teaching Thai as a foreign language. More understanding of and attention to such features can help Thai language learners improve their spelling skills in Thai. Moreover, spelling the Thai language needs plenty of practice and training since there are various factors that might result in errors. In order to achieve a higher level in spelling, language learners of Thai might need to make use of practice in both natural environment and classrooms.

Thirdly, it is apparent that many spelling errors made by the students can be traced back to misarticulation or an unclear pronunciation. A clear pronunciation reflects a speaker's high level of proficiency in learning a foreign language. On the contrary, an unclear pronunciation not only affects the image of speakers, but is also a potential factor that might cause spelling errors. Therefore, a clear and correct pronunciation should be a continuous pursuit of foreign language learners. Learning to spell Thai is the same, both learners and instructors of Thai need to emphasize the importance of pronunciation and pay more attention to correcting mistakes in speaking.

Finally, the study shows that the native languages of the students who learn Thai as a foreign language are very important and need to be taken into consideration. Those whose mother tongue is written with characters, like Chinese and those whose native language is written with alphabet scripts are different in their problems with spelling. Particularly, those who speak the language that is very similar to the language they learn, like Lao students, they obviously have more serious problem underestimating the difference in the writing systems between the closely-related languages (as Thai and Lao). Therefore, in teaching foreign students how to spell words in their target language, the teacher may have to take into account what their native languages are,

what the writing systems they use, and what the writing system of the language they are learning is like.

7.4 Suggestions for further studies

The procedures and findings of this study seem to imply some limitations and unsolved problems, which suggest that certain further studies should be done. Firstly, there should be a study that is based on a larger number of participants. As explained in 1.6, the participants tend to use avoidance strategy because of anxiety, so some possible errors might not appear. Increasing the number of participants would be effective because the more participants take part in the study, the more spelling errors in terms of number and diversity are supposed to be made. Therefore, a larger number of participants is recommended in further studies.

Secondly, Thai acquisition of Lao students is also a research topic that deserves attention from scholars. Due to very little linguistic distance between Thai and Lao and the extensive use of the Thai language in Laos, Lao students are in advantageous position than students from any other country. However, their output in the present study is not as good as expected. I think there need to be more studies on the imbalance between spelling and other skills on the part of Lao people when they learn to write Thai words, and vice versa; that is, on the part of Thai people when they learn to write Lao words.

Thirdly, Chinese students' dialects seem to play a role in their Thai spelling based on the finding of their spelling errors. The phonology of Chinese dialects causes unclear pronunciation of Chinese students when speaking Thai. Further, the misarticulation is transferred into their Thai spelling. Different Chinese dialects are supposed to cause different patterns of spelling errors, as every Chinese dialect has its own distinct characteristics, for instance, /n/ and /l/ sounds are not distinguished in the Southwest Mandarin; /h/ and /f/ sounds are blended in some dialects spoken in Fujian Province; some northern dialects carry strong back nasal sound /ŋ/ while some southern dialects tend to use the front nasal sound /n/ to replace /ŋ/, etc. Thus, I think that there should be a study that deals with the influence of Chinese dialects on the Thai

language acquisition of Chinese students spoken various Chinese dialects.

Finally, since the present study shows that different native languages of spellers tend to cause different patterns of spelling errors in Thai, I think that it would be interesting to study spelling errors in Thai made by the people who speak languages that are written with Roman alphabet scripts, such as Malay, Filipino, Vietnamese. Also, those who speak languages written with other kinds of scripts may also be interesting, as Japanese, Arabic, Cambodian.



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APPENDIX

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Appendix 1 Composition writing

Dear Participants:

This is the second part of the questionnaire. In this part, you are requested to write a composition in Thai about 100-150 words long. The topic of the composition is “My country”. You will have 20 minutes. Please try not to use any fancy scripts in your essay writing and try to make the composition clear and readable.



Appendix 2 Word dictation

In the last part of the questionnaire, you will hear 60 Thai words one by one. Each of the target words will be read in isolation, then will be put into a sentence and the whole sentence will be read once. There will be a five-second pause after each sentence for participants to write down the target word on the answer sheet. The word dictation task will take approximately 20 minutes to complete.

1. กงสุล: กงสุลพม่าประจำฮ่องกงเขียนบันทึกถึงทางการฮ่องกง
2. ศัพท์: เขาพูดไทยได้ชัดก็จริงแต่คำศัพท์ที่ใช้ก็ผิดบ้างถูกบ้าง
3. ประเทศ: ประเทศจีนมีการปกครองแบบสังคมนิยม
4. รัฐบาล: รัฐบาลรับซื้อผลผลิตจากเจ้าของที่ดินในราคาถูก
5. ทราย: พื้นที่โลกส่วนที่เป็นของแข็งประกอบไปด้วยกรวด หิน ดิน ทราย
6. แลกเปลี่ยน: ที่ประชุมกลุ่มเปิดโอกาสให้ทุกคนแลกเปลี่ยนความคิดเห็นซึ่งกันและกัน
7. ขนม: อย่ากินขนมมากเพราะจะทำให้อ้วน
8. เครื่องมือ: มนุษย์สามารถทำให้คอมพิวเตอร์เป็นเครื่องมือที่แก้ปัญหาได้ทุกรูปแบบ
9. ลำไย: พืชผักผลไม้ที่สำคัญของไทย คือ ทุเรียน ลำไย เงาะ มะม่วง กัลฉ่าย ส้มโอ มะพร้าว
10. คณบดี: คณบดีเป็นประธานในการประชุมเมื่อวานนี้
11. เผชิญ: พม่ากำลังเผชิญกับปัญหาภายในประเทศอย่างต่อเนื่อง
12. แทรกแซง: เราไม่ควรไปแทรกแซงเรื่องของคนอื่น
13. ร้องไห้: การร้องไห้ไม่ได้ช่วยอะไรดีขึ้นเลย
14. ชัยชนะ: ในสงครามโลกครั้งที่ 2 ฝ่ายพันธมิตรเป็นฝ่ายที่ได้รับชัยชนะ
15. ไม้บรรทัด: เด็กใช้ไม้บรรทัดวัดความยาวของสี่เหลี่ยม
16. โทรทัศน์: ละครโทรทัศน์เกาหลีกำลังได้รับความนิยมในเมืองไทย
17. เสร้าโศก: เหตุใดคุณจึงเสร้าโศกขนาดนั้น
18. ประสบการณ์: คุณครูคนใหม่มีประสบการณ์ทางการสอนมา 20 ปี
19. ผลิตภัณ์ท์: คณะกรรมการสั่งให้แก้ไขหรือปรับปรุงผลิตภัณ์ท์อุตสาหกรรมให้เป็นไปตามมาตรฐาน
20. กลิ่น: ดอกไม้สวยเหล่านี้มีกลิ่นหอม

21. สนาม: เย็นนี้ไปออกกำลังกายกันที่สนามกีฬาใหม่
22. กรุณา: กรุณาเปิดประตูให้ด้วยครับ
23. แน่นแฟ้น: ประเทศลาวกับประเทศจีนมีความสัมพันธ์ที่แน่นแฟ้นต่อกัน
24. กฎหมาย: เขาชอบแสดงตนว่าเป็นคนรู้เรื่องกฎหมาย
25. ปรับปรุง: สหรัฐฯเรียกร้องให้ไทยปรับปรุงกฎหมายที่เกี่ยวกับการคุ้มครองทรัพย์สินทางปัญญา
26. ปฏิเสธ: รัฐบาลปฏิเสธไม่ยอมรับรองความตกลงที่คณะกรรมการทำเอาไว้
27. สังเกต: ถ้าคุณสังเกตให้ดี ๆ ก็จะเห็นได้ว่าที่นี่มีความสุขยามมากกว่าที่อื่น
28. สามัคคี: ถ้าบุคลากรภายในองค์กรสามัคคีกัน จะทำให้องค์กรสามารถฝ่าฟันอุปสรรคไปได้
29. โอกาส: ถ้าผมมีโอกาสอีกครั้งหนึ่ง ผมจะพยายามทำดีกว่าครั้งนี้
30. สุขภาพ: ถึงแม้ว่าคุณอายุอายุ ๘๐ ปีแล้ว แต่สุขภาพยังแข็งแรงมาก
31. เคย: เขาเคยไปมาแล้วทุกแห่งหนในประเทศไทย
32. แสดง: เขากำลังเรียนการแสดงที่โรงเรียนอยู่
33. อนุญาต: เขาขออนุญาตจากพ่อแม่ไปเที่ยวกับเพื่อน
34. สะดวกสบาย: ปัจจุบันนี้ การเดินทางไปภาคตะวันออกสะดวกสบายเพราะมีทางตัดใหม่มากมาย
35. โฆษณา: โฆษณาไทยมักจะทำให้ผู้ชมซาบซึ้ง
36. ดังนั้น: นโยบายนี้ขัดกับความสงบของประชาชน ดังนั้นจึงมีการร่างนโยบายขึ้นมาใหม่
37. งูเห่า: พิษของงูเห่ามักทำอันตรายต่อระบบประสาททำให้กล้ามเนื้ออ่อนแรง
38. หลงใหล: หนังสือเล่มนี้เป็นเล่มที่ผมเคยอ่านอย่างหลงใหล
39. ทรัพย์สิน: พ่อฝากทรัพย์สินเงินทองทั้งหมดไว้กับฉัน
40. ไร้ค่า: เขาไร้ค่าและดูถูกความมั่งงายของชาวบ้าน
41. สดชื่น: อากาศวันนี้สดชื่นมาก
42. กำไร: เขาทำการค้าขายเก่งมาก จึงได้กำไรเยอะ
43. ฟุตบอล: โรงเรียนต่าง ๆ จัดให้มีการสอนฟุตบอล
44. สัมพันธ์: ความสัมพันธ์ระหว่างประเทศจีนกับประเทศไทยมีมาช้านาน
45. เบียร์: เบียร์นี้จัดซีดเหลือเกิน
46. บริการ: เขาทำงานบริการน้ำให้ลูกค้าในร้านอาหาร
47. มอเตอร์ไซค์: เขามีอาชีพเสริมคือขี่มอเตอร์ไซค์รับจ้างในซอย
48. กรกฎาคม: โรงเรียนมีโปรแกรมจัดทัศนศึกษาในเดือนกรกฎาคมนี้
49. ลำไส้: หมอตรวจพบว่า เขาเป็นแผลที่ลำไส้เล็ก
50. บรรเทา: ยาชนิดนี้จะช่วยบรรเทาอาการท้องเสีย
51. ครอบครัว: ครอบครัวจะช่วยหล่อหลอมเยาวชนให้เติบโตใหญ่เป็นคนดีของสังคม

52. อนุมัติ: สหรัฐฯ ได้อนุมัติเงินจำนวน 33 ล้านเหรียญสหรัฐสำหรับโครงการนี้
53. ทรมาน: ผมรู้สึกทรมานมากที่คุยกับคนที่พูดจาไม่สุภาพ
54. ประโยชน์: เนื้อปลาเป็นอาหารที่มีคุณค่าและเป็นประโยชน์ต่อร่างกาย
55. ปราบกฏ: เมื่อเราป้อนข้อมูลต่าง ๆ เข้าไปจนครบภาพต่าง ๆ จะปรากฏขึ้นบนหน้าจอ
56. สร้างสรรค์: เขาได้รับเกียรติว่าเป็นศิลปินดีเด่นที่สร้างสรรค์ศิลปะที่มีผลงานยอดเยี่ยม
57. ผูกพัน: เพื่อนสองคนนี้มีความผูกพันกันมานาน
58. วัฒนธรรม: ผู้คนมากมายเดินทางท่องเที่ยวเพื่อศึกษาวัฒนธรรมของคนในท้องถิ่นต่าง ๆ
59. เลียนแบบ: ความฉลาดของมนุษย์เป็นสิ่งที่คอมพิวเตอร์ไม่สามารถเลียนแบบได้
60. เครียด: พ่อที่นั่งสูบบุหรี่มีสีหน้าเครียดอยู่ข้าง ๆ แม่



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Mr. Peng Hou was born on September 30, 1992 in Shanxi Province, China. He received his Bachelor of the Thai Language from Xi'an International Studies University, China. After working for one year as a Thai-Chinese translator in a state enterprise, he pursued his study in the Southeast Asian Studies Program of Chulalongkorn University for a Master Degree. As a Thai language learner, his research interests mainly concern learning and teaching Thai as a foreign language. After two-semester survey and research, he finished the thesis entitled "SPELLING ERRORS IN THAI MADE BY CHINESE AND LAO STUDENT SPEAKING THAI AS A FOREIGN LANGUAGE".

