The Effect of Word Part Strategy Instruction on Vocabulary Knowledge of Thai
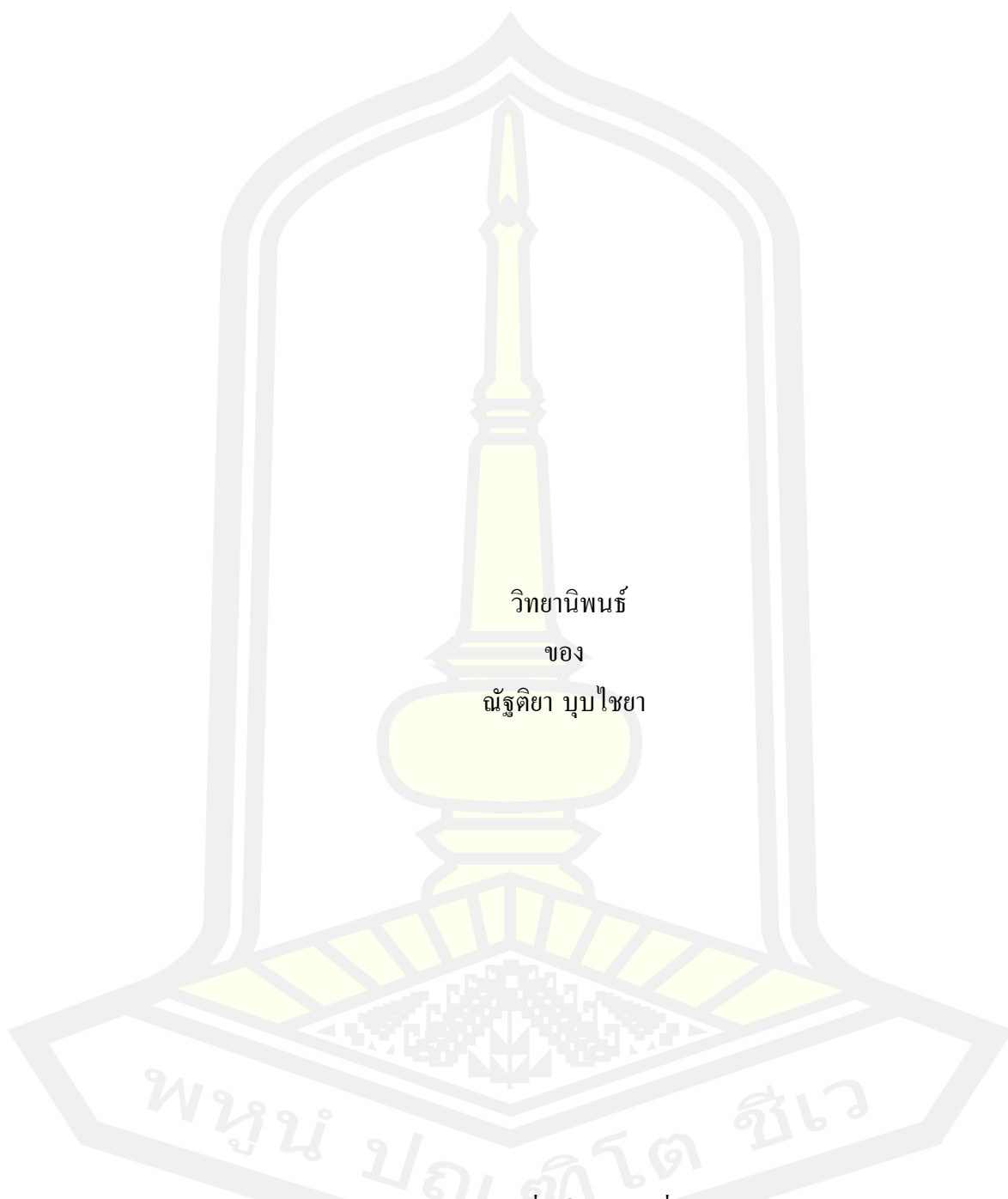Primary School Learners

Nuttiya Bubchaiya

A Thesis Submitted in Partial Fulfillment of Requirements for

degree of Master of Education in English Language Teaching

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for Master of Education (English Language Teaching)

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ABSTRACT

Vocabulary learning strategy is essential in vocabulary acquisition, and one of the vital vocabulary strategies is a word part strategy. This quasi-experimental research attempted to investigate the effects of the word parts strategy instruction on vocabulary knowledge among primary school students in a Thai EFL context. It also sought to explore primary school students' attitudes about the use of the word-part strategy instruction on vocabulary acquisition and development. The two-group pre-test and post-test design was employed for this study. The participants consisted of two intact classes divided into experimental and control groups. The experimental participants receiving thorough training on word part strategies comprised 27 students, while the control colleagues who received no additional treatment on word part strategies consisted of 25 students. Three measures of word part knowledge were developed and validated before the data collection. The five-point Likert scale questionnaire was also employed to explore the experimental participants' attitudes towards implementing word part strategy instruction on vocabulary learning. Descriptive and inferential statistics were used to analyze the quantitative data. The results showed that the students in the experimental participants with word part strategy instruction outperformed those in the control group. Specifically, the dependent samples *t*-test analysis revealed the significant improvement between before and after treatment, indicating the positive effect of word part strategies on vocabulary learning among primary school students. The current study also showed that primary school students had a high level of satisfaction with the use of word part strategy instruction. Together, the present findings suggest the efficacy of word part strategies on vocabulary learning and development among primary school learners. Other implications relevant to pedagogical practices and suggestions for further studies are offered.

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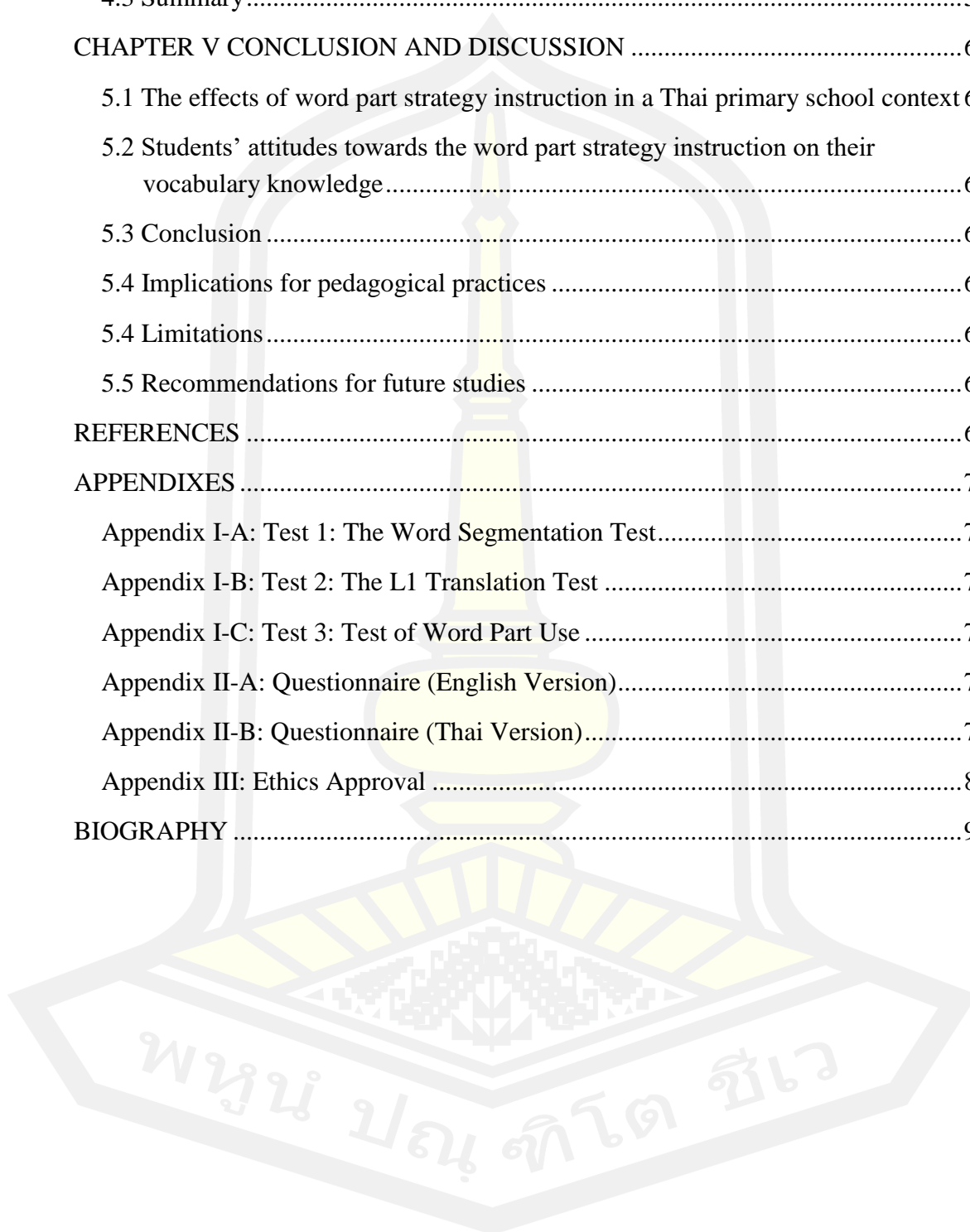
Nuttiya Bubchaiya

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CHAPTER I

INTRODUCTION

1.1 Background of the study

Vocabulary is central to language and critical to typical language learners (Amer, 2002) and knowing words is a key to understanding and being understood (Laufer & Goldstein, 2004; Nation, 2013; Schmitt, 2010: Schmitt & Schmitt, 2014). Vocabulary learning has also been a significant concern for second language (L2) learners (Nation, 2013). The significance of vocabulary learning can be viewed by investigating the body of research done in this regard (Nation, 2013; Schmitt, 2010; Singleton, 2008), the variety of teaching techniques (Nation, 1990) and the number of word lists offered for different purposes (Laufer, 1992; Nation, 1990; West, 1953).

For effective instruction, Schmitt (2000) suggested two teaching methods for vocabulary learning. The first method is 'explicit learning', which draws attention to the learned information. The second method is 'incidental learning', where language is used for communicative purposes and does not focus exclusively on new words in the text. L2 vocabulary researchers showed that explicit (intentional) learning is more effective than implicit (indirect) methods (Hunt & Beglar, 2005; Prince, 1996) and that explicit vocabulary teaching can enhance vocabulary development (Schmitt, 1998; Zimmerman, 1997). Accordingly, direct vocabulary instruction is highly recommended by many practitioners for providing necessary assistance to language learners in both lexical learning and long-term retention (Rodriguez & Sadoski, 2000).

In Thailand, learning English as a foreign language is one of the compulsory subjects. Many students have learned English since they were in kindergarten till they graduated the University. However, they cannot communicate in English well, including in the researcher's classroom. The study participants were Thai students in the sixth grade of primary school. Participants were selected from two schools where students have a basic level of English. One of the problems in learning English in this language classroom is that students cannot remember the vocabulary and its meaning. To facilitate students in learning vocabulary, teachers should consider the techniques

that help them learn and remember words. Learning vocabulary should be more emphasised, especially when students are very young. Regarding facilitating vocabulary learning, teachers have made hard choices among a variety of vocabulary strategies. Therefore, they want to be answered on which strategy has a more significant impact on L2 vocabulary acquisition and long-term recall (Oxford, 1990). Vocabulary learning strategies are one part of language learning strategies, which, in turn, are part of2 general learning strategies (Nation, 2013). Nation (2008) suggested four vocabulary learning strategies: word parts, word cards, dictionaries, and context clues. Among which word parts strategy is the focus of the present study since this strategy, for learners, is to increase their vocabulary is to analyze newly encountered words by breaking down unfamiliar words into manageable parts; prefixes, base words or roots and suffixes. The word part strategy also facilitates learners learning unknown words by building words from word parts. Word analysis builds upon learners' understanding of known parts, which account for more than 50% of the polysyllabic words in academic texts (Kuhn & Nagy, 1991). In addition to creating new words, suffixes are essential since they enable learners to understand and interpret the texts (Nagy, 2010, Sukying, 2018).

Additionally, researchers on L2 vocabulary learning argue that teaching approaches remain an essential foundation of successful vocabulary learning in EFL learners (Hees & Nation, 2017; Nation, 2013, Ernst & Sukying, 2021). EFL learners primarily acquire L2 vocabulary in the language classroom. As such, teachers must consider the approaches they apply to vocabulary teaching. Teachers must also view their students' proficiency levels and employ teaching approaches to ensure vocabulary acquisition. Researchers also argued that solid vocabulary is vital for every stage of language learning (Laufer, 1997; Nation, 2013). Therefore, vocabulary and lexis are central in learning and teaching (Lewis, 1993; Laufer, 1997; Richards & Rodgers, 2001).

More recently, research shows the positive effects of word parts strategy instruction on vocabulary acquisition (Harraqi, 2019; Karliova, 2009; Liu, 2011; Sukying, 2020). For example, Sukying (2020) examined the effects of affix instruction on acquiring morphological complex words. The participants were 92 university students. They were divided into two groups. The treatment group was provided with the explicit

teaching of affix knowledge, whereas the control group was not. To measure students' affix knowledge, they acquired to take the tests. The data were analyzed using a repeated measure ANOVA. The result showed a positive effect of affix instruction in the English language classroom.

To date, it is widely accepted that vocabulary teaching should be part of the syllabus and taught on a well-planned and regular basis. Various types of techniques and materials have been designed and developed for effective vocabulary teaching. According to the previous3 reviews, most studies had been conducted at the tertiary level of education. However, using word parts remains one of the least under-researched techniques for teaching vocabulary, especially in Thai EFL primary small school context. Moreover, few studies have ever been developed based on word parts accounts to the best of the researcher's knowledge. Hence, the current study aims to investigate the effect of word-part strategy instruction on Thai EFL primary school students' vocabulary learning. Understanding the nature of vocabulary growth may help practitioners develop teaching techniques for their classroom practice. In addition, understanding the roles of word parts will shed some light on the development of receptive and productive vocabulary knowledge among young EFL learners.

1.2 Purposes of the study

The current study examines the effects of the word parts strategy instruction on vocabulary knowledge among primary school students in a Thai EFL context. It is hypothesized that the use of word parts teaching can facilitate vocabulary learning, thus, increasing learning vocabulary knowledge. Primarily, it aims at examining the effects of word parts strategy instruction on acquiring vocabulary knowledge. In addition, it further explores primary school students' attitudes about the word parts strategy instruction on their vocabulary knowledge acquisition. To achieve such established goals, the following research questions are formulated:

1. To what extent does word part strategy instruction affect Thai primary school students' vocabulary knowledge?

2. What are Thai primary school students' attitudes towards the word part strategy instruction on their vocabulary knowledge?

1.3 Scope of the study

This quasi-experimental study focuses on Thai primary school learners acquiring vocabulary knowledge by using word parts strategy instruction. The participants are 52 Thai EFL learners in the sixth grade. The participants are from two schools. The researcher uses convenience sampling to choose two groups, one group as a control group and another as an experimental group. The instruction is about word parts strategy (breaking down words into parts, building words), and the researcher chooses the vocabulary from the 'Smile' textbook, grade 6. Then, the vocabulary were checked against the New General Service List (NGSL) (Browne, Culligan, & Phillips, 2013). The experimental group receives 16 additional hours of explicit instruction on vocabulary knowledge. In contrast, the control group receives no additional explicit treatment. The study is conducted over two months of the second semester of the 2021 academic year. SPSS analyzes the test scores to determine whether they indicated a statistically significant difference pointing out the effect of word parts instruction on vocabulary acquisition.

1.4 Significance of the study

The significance of the study can be illuminated from different perspectives. Firstly, for students who are interested in learning vocabulary, knowing how good the learners' vocabulary knowledge is promotes understanding of their English standards. When learning about word parts strategy, they may be able to guess the meaning of a word based on the meaning of its parts or by relating the unknown word to other words they are familiar with. Knowing how to recognize and understand word parts can also be used to see if an unfamiliar word has been correctly deduced from context. Moreover, for students in the specific context of primary education, learning English and knowing a lot of vocabulary can help them considerably.

Secondly, better understanding students' stages of vocabulary development enable teachers to adopt suitable pedagogical practices. As primary school context attaches more importance to improving students' English proficiency, the present research findings should generate valuable information for those responsible for organizing English enhancement courses and related language activities on campus. At the same time, the lack of studies examining both areas of participants' vocabulary knowledge,

i.e., the vocabulary size and the quality of their knowledge, make the present research even more meaningful. In addition, the lesson plans in this study could be a hands-on guideline for practitioners when the teacher teaches word parts for vocabulary development.

All in all, this research gives benefits to the English learners and English teachers for learning and teaching vocabulary. There are many learning and teaching techniques to learn vocabulary. Vocabulary is one of the most important parts of English; therefore, it is considered the most important one for students learning English as a foreign language. However, they cannot communicate the ideas transmitted to them because of their limited vocabulary. Therefore, word part strategy instruction is one of the most valuable instructions to help students learn English and gain more vocabulary knowledge.

1.5 Definitions of key terms

Word parts refer to words made up of simple word parts (prefixes, roots, and suffixes) that can be understood in context without an exact definition.

Receptive vocabulary knowledge is the words learners recognize and understand when used in context but cannot produce.

Productive vocabulary knowledge is the learner's words and can pronounce correctly and use constructively in speaking and writing.

The word part strategy instruction refers to the technique that involves analyzing words by breaking down unfamiliar words into manageable parts; prefixes, base words or roots and suffixes. Besides, the word part strategy also facilitates learners learning unknown words by building more complex words from word parts.

Thai primary school learners refer to students studying in grade six at a small school with less than 100 students. Their age is between 11-12 years old.

Vocabulary knowledge refers to form, meaning, and use of a word in the learning process.

1.6 Structure of the thesis

Chapter One presents the background of the study, purposes of the study, scope of the study, significant of the study and definitions of key terms.

Chapter Two presents definition of the vocabulary, the theoretical frameworks of knowing a word, goals of vocabulary learning, vocabulary learning strategies (VLSs), and word parts strategy.

Chapter Three outlines the research methodology of the current study, including the research design, the participants and setting, the research instruments, as well as data collection and analysis procedures.

Chapter Four reports the study results, which include two sections based on the two research questions.

Chapter Five, the results are analyzed and discussed, and the summary, implications for practice, limitations, and recommendations for future studies are also presented.
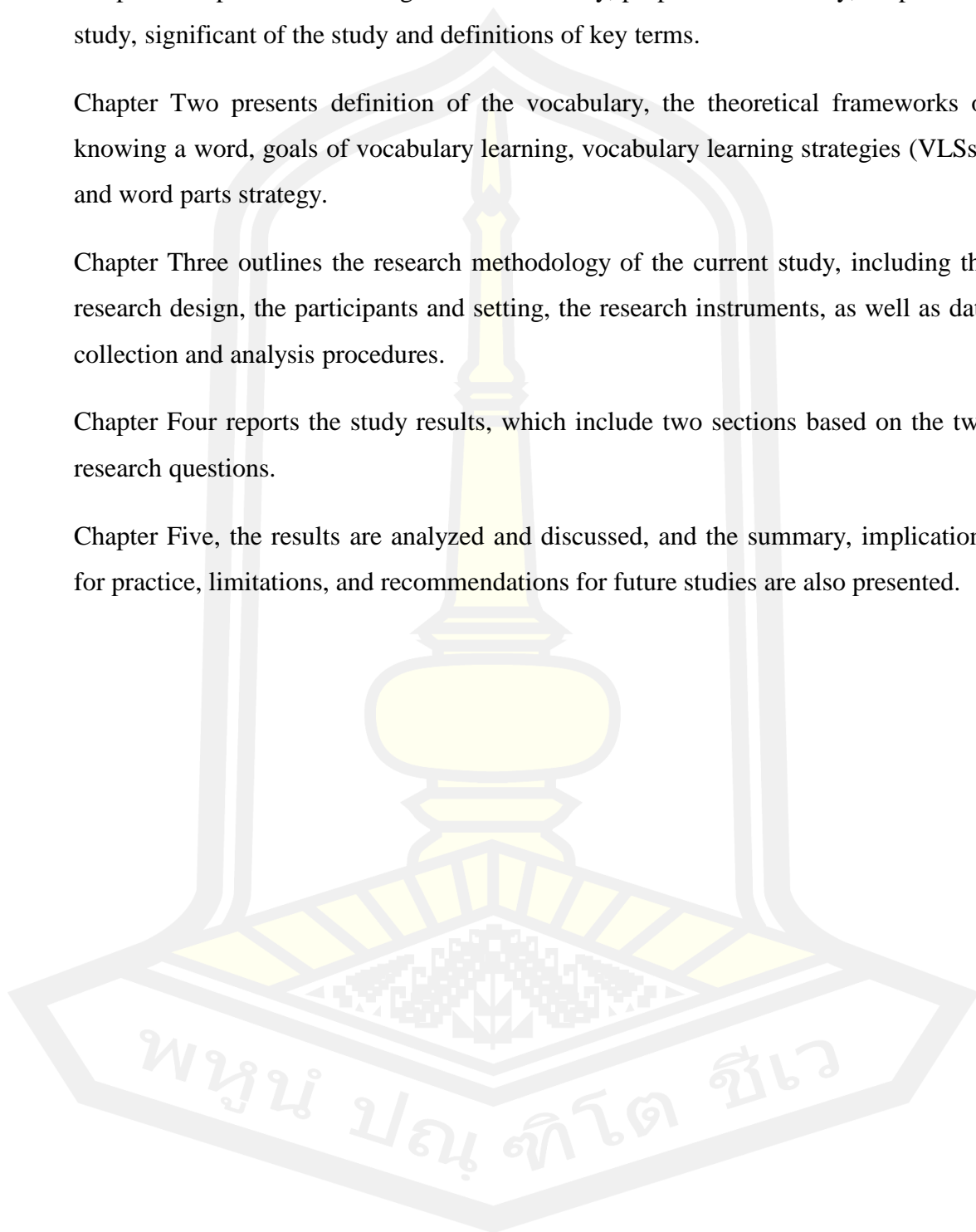
CHAPTER II
LITERATURE REVIEW

This chapter will first define the vocabulary, the theoretical frameworks of knowing a word, goals of vocabulary learning, vocabulary learning strategies (VLSs), and word parts strategy. An overview of the relevant studies will also be provided.

2.1 Vocabulary

2.1.1 Definition of vocabulary

Several experts give different meanings to vocabulary. According to Oxford English Dictionary (1991, pp.461), vocabulary is "total number of words in a language, words known to a person, list of words, their meaning, especially at the back of a book used for teaching a foreign language." In addition, Richards (2002) added that "Vocabulary is a crucial component of language ability and provides much of the basis of how effectively learners speak, listen, read, and write," Learners who do not have a large vocabulary or strategies for expanding their vocabulary often achieve less than their potential and may become discouraged from taking advantage of language possibilities available to them." Hash and Brown (1995) defined vocabulary as a set or list of words for a particular language or a list of words that each person use to communicate. Hornbly (1995) proposed the entire number of words in a language; a list of words and their definitions, particularly one that appears in a textbook. Vocabulary, according to Rupley, Logan, and Nicols (1998), is a firm attachment that holds tales, ideas, and information together and makes comprehension easy for kids. These definitions demonstrate that vocabulary is one of the most important aspects of learning English.

Based on the definitions above, the researcher concludes that vocabulary is all about words, whether they are the words in a language or a specific group of words you are attempting to learn in order to communicate successfully.

2.1.2 Types of vocabulary

Stepen Lauber (2014) distinguishes between different sorts of vocabulary. Academic vocabulary, content vocabulary, and support vocabulary are all types of vocabulary. Academic vocabulary refers to terminology that students use in academic

conversations. Content vocabulary is only used in a given subject or area, and it is rarely used outside of that subject or area. Support vocabulary is employed to support a concept so that it is easier to comprehend. A passage or text may contain support vocabulary.

Jo Ann Aeborsold and Mary Lee (1997) divided two types of vocabulary; Active vocabulary and Passive vocabulary. Active vocabulary refers to students who can utilize vocabulary correctly in speaking or writing. This type of vocabulary is referred to as productive vocabulary. However, putting it into reality is more difficult. In order to employ active vocabulary, students must first understand and be able to use the language's grammar. They must be familiar with collocation and understand the meaning of the words' meaning. Passive vocabulary, on the other hand, refers to definitions that can be recognized while reading or listening. It is also referred to as receptive vocabulary. Passive vocabulary is made up of terms that pupils understand while they read and listen.

Moreover, Nation (2001) separated vocabulary into two categories: receptive and productive vocabulary. Hatch & Brown (1995) quote Haycraft as saying the same thing as Nation. There are four types of vocabulary in the text, according to Nation (2001). The first is high-frequency words, which account for over 80% of all writing. The second is Academic words, which account for about 9% of all words. The third category includes technical terms, which account for about 5% of all words. The final category is low frequency words, which are moderately frequent words. Nation (1994:3) states that vocabulary can be classified into two categories based on frequency: high frequency vocabulary and low frequency vocabulary.

a. High-frequency words also refer to words that occur very frequently in all kinds of language uses. Those words are included in the 2,000 most frequent word families in General Service List (West & West, 1953). They are frequently employed in written and spoken texts, including newspapers, conversations, novels, academic texts, informal and casual situations. (Nation, 2008). They cover 80% of the words in most written texts and 90% of the words in spoken texts (Nation, 2008). The majority of high-frequency word lists are made up of 2,000-word families and are very short.

Besides that, there are 169 words from the list that are function words such as conjunction (and, or, but), pronoun (I, you, she, it), number (one, two, three) and so on. The rest of the function words are content words such as nouns, verbs, adjectives, and adverbs. They are also prevalent words that even a very young native English speaker knows. (Nation, 2008). They are required every day when we use English. These words are essential; thus, Nation (2008) suggests that these words should be put on the first list of the target words in any kind of vocabulary development program.

b. Low frequency vocabulary, on the other hand, only covers a small percentage of the word families in a continuous text, implying that it is rarely employed in everyday English language activities. There are over 100,000-word families in this group.

From the explanation above, types of vocabulary can be divided by several experts. Each type of vocabulary has a different purpose. The development of one type of vocabulary leads to the growth of another.

2.1.3 Word selection

The conversation is the most efficient way for young children to learn new words, but as they become older, oral situations become less successful because regular conversation rarely contains terms that are not already widespread (Beck & McKeown, 2007). With this information on vocabulary development, it is clear that children should be engaged in new words for long periods of time through oral and written vocabulary experiences as early as possible and throughout their educational years (Neuman & Wright, 2014).

When considering words for instruction, teachers should choose target words beforehand and plan instructional support around them. Books should be selected appropriately for their vocabulary (Kindle, 2009). According to Beck and McKeown (2007), focus on partially learned words, that 20 percent to 70 percent of a target group of students know, because students can make advances on these words. Kelley et al. (2010) suggested that a small number of words, their parts, and related words be taught in rich situations. The amount of word meanings in a student's lexicon is crucial, and how well pupils know word meanings is a significant feature of vocabulary, according to most academics (Coyne et al., 2009). Furthermore, Kindle

(2009) stressed the importance of the words that learners are acquiring in terms of their quality.

According to Kindle (2009), words are categorized into three tiers. Tier 1 words, such as automobile and house, are the easiest for children to learn as part of everyday language. Tier 2 words are high-frequency words found in a range of fields for advanced language users (Kelley et al., 2010). Many studies suggest that Tier 2 words should be the emphasis of vocabulary education since children are less likely to learn and master Tier 2 terms on their own, and they are less likely to learn these words from grade-level materials (Beck & McKeown, 2007). Tier 3 words are more content-specific vocabulary that is taught in math, science, and social studies classes. Some academics suggest that because these words are content-specific, they do not require significant education (Jalongo & Sobolak, 2011).

Moreover, Laufer and Nation (2012) proposed that vocabulary selection criteria consist of frequency, usefulness, and learnability/difficulty. Firstly, frequency; in teaching and learning, high-frequency terms should be prioritized, especially for lower-level students (Laufer, 2014; Nation, 2011, 2013a, 2013b; Nation & Webb, 2011). This is why lists of high-frequency words have been created, such as the General Service List of English Words (West, 1953). Another key criterion for word selection, according to Laufer and Nation (2012), is utility. Because nonnative speakers are more likely than native speakers to master fewer L2 terms, the vocabulary chosen for learning should be as beneficial as feasible for functioning in the target language (Laufer & Nation, 2012). Lastly, in general, both simple and difficult terms are worth learning. Learning simple words improves conversational abilities without needing much effort, whereas teaching complicated terms reduces linguistic faults associated with challenging vocabulary (Laufer, 1990a).

Therefore, it is beneficial to have a model to help make a decision when designing instruction. One of the most important things that teachers should consider is what words to teach and they should appropriate student's levels.

2.2 Knowing a word

Several researchers define the meaning of word knowledge. Word knowledge has known as vocabulary knowledge (Laufer, 1998, 1992, 1997; Nation, 2013) or lexical knowledge (Laufer & Goldstein, 2004; Schmitt, 2014). Its definition can be the words of a language, consisting of a single item and phrase or chunks of several words that covey a particular meaning (Henriksen, 1999; Milton, 2009; Nation, 1990, 2001, 2013; Read, 1993, 2000; Schmitt, 2014). In addition, word knowledge also incorporates comprehension and use of words and requires an understanding of concrete and abstract meanings (Nation, 2013).

From a vocabulary perspective, word knowledge is more than a part of knowing word form and meaning. Word conceptualization and its attributes have been described in several ways. In this sense, the analysis of the word has hinged on lexical researchers, who map out the use of terminology that suits their purposes of vocabulary test batteries and contexts. As such, it is necessary to note that a range of theoretical frameworks and word descriptions have been dubbed. However, in the following section, two distinct dichotomous aspects of lexical knowledge, 'breadth' and 'depth', are constructed.

An early interpretation introduced by Anderson and Freebody (1981) conceptualizes vocabulary knowledge as depth and breadth knowledge of vocabulary. 'Depth' of knowledge of the individual lexicons is reflected as the 'quality' or 'depth of one's understanding of a particular word. Conversely, 'breadth' of lexical familiarity is regarded as the number of known words. Additionally, 'depth' of knowledge in more recent research studies (Li & Kirby, 2014; Read, 1993, 2004) is termed as the depth or quality of the learner's word information knowledge; meanwhile, 'breadth' is described as the size of the learner's knowledge of the individual vocabulary. Saying this another way, 'breadth' of lexical knowledge, labelled as the size of vocabulary, contains the number of vocabulary items (a number of words) where word meanings are known at least to some extent; conversely, 'depth' of knowledge, labelled as the richness of lexical understanding, it encompasses how well a person understands a particular word. Accordingly, the notion of breadth of knowledge of the lexical items is relatively easy to define and construct when compared with the depth of knowledge

because the depth conceptualizations of word knowledge contain several associative networks and numerous polysemous meaning senses.

Knowing a vocabulary item is more than knowledge of a single aspect of the word. Henriksen's (1999) study points out that recognizing a word involves three dimensions of word knowledge: the knowledge scales of partial-precise features, the depth of knowledge, and the knowledge of receptive versus productive dimensions. In general, partial-precise knowledge includes various degrees of word knowledge. She emphasizes the degrees of the recognition of word meaning and form. Henriksen advocates that vocabulary knowledge contains multifarious aspects of knowing a word about the depth of knowledge. Likewise, for the receptive-productive dimension, she agrees that subtle variations in lexical items are associated with the ability to use and comprehend an individual word.

Nation (2001) proposes three divergent domains of lexical knowledge due to the density and multiplicity of word knowledge: form, meaning, and use. The information on 'form' encompasses the ability to identify the verbal and printed forms and declarative affixes of a word. Knowing the area of the meaning of a lexical item entails that a learner has insight into form and meaning, concepts and referents, and lexical networks (associations). Consistent with the area of use is the skill to employ the word with language accuracy (grammatical functions) and appropriate collocates (collocations) and the awareness of word usability (constraints on use), including register and frequency. According to Nation's (2001) guidelines, there are nine different facets of the word information, including receptive-productive distinctions (see Table 1).

Table 1: Components of vocabulary knowledge (Nation, 2001, p. 27)

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
	Word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express meaning?
Meaning	Form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concepts and references	R	What is included in the concept?
		P	What items can the concept refer to?
	Associations	R	What others words does this word make us think of?
		P	What other words could we use instead of this one?

Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of word occur with this one?
		P	What words or types of words must we use with this one?
	Constraints on use	R	Where, when and how often would we meet this word?
		P	Where, when and how often can we use this word?

Notes: R= receptive, P= productive

According to Nation (2001), knowing a word form consist of spoken form, written form, and word parts. Spoken and written form are crucial word knowledge that facilitates learners to continue to literacy. The knowledge of phonics, spelling, and word reorganization allows learners to decode word meaning and use the word relevant in a different context. Besides, in receptive knowledge, knowing the spoken form means knowing the spoken form in hearing this word and being able to say the word clear that make other people understood in the conversation, known as productive knowledge. When reading, knowing the written form means being able to perceive the written form, we call receptive knowledge; in the meantime, in writing, knowing the written form means being able to spell precisely the written form; this is productive knowledge (Schmitt, 2000).

Regarding word meaning, Nation (2001) indicates that knowing the meaning of a word consist of connecting form and meaning, concept and referents, and word associations. Generally, at the same time, the word form and meaning can be learned together. It means that when learners hear and see the word form, its meaning will be retrieved, while when they want to express its meaning, the form will retrieve it. Daulton (1998) describes that the same form in the target language and first language make learning the word meanings burden light. Aitcheson (1987) also explains that there is an unclear boundary in the meanings of a word. One of the major reasons is that schema is different in different contexts (Schmitt, 2000). Moreover, Richards (1976:81) claims that 'words do not exist in isolation. Knowing a word involves knowing word association. Word associations are related to each other in people's minds. One word is given to a learner; some are alike or opposite, and associated words simply come to mind.

Concerning word use, Nation (2001) identifies that due to many factors, such as register, frequency, and different cultures, knowing how to use a word involves

knowing the word grammatical functions, collocations and being aware of constraints on use. The grammatical function is a part of the essential linguistic constraints in selecting a word to use. The grammatical function refers to word classes and grammatical patterns the word can fit into. For example, we can say, 'I bite a lot, I eat a lot, I speak a lot'; however, we cannot say 'I bitten a lot, I eaten a lot, I spoken a lot.' Register and frequency are other particular types of word constraints on use. The register is the stylistic constraints that 'make each word more or less appropriate for certain language situations or language purposes' (Schmitt, 2000:31).

A large body of lexical research has, thus, shown that conceptualization of vocabulary is multifacetedness and density of knowledge (Henriksen, 1999; Nation, 1990, 2001; Read, 1993; Schmitt, 2014; Schmitt & Meara, 1997). Depth of the individual lexical items is associated with multiple knowledge features and multiplicity of meanings in relevantly different contexts. In addition, experimental studies measuring the depth of knowledge indicate associations between different aspects of word knowledge (Milton, 2009; Schmitt & Meara, 1997) and knowing a word includes the extensive lacunas in word learning. Other investigations (Qain, 1999, 2002; Read, 2000, 2004) also indicate that knowing a word is more than just a part of linguistic features. Instead, word knowledge contains multilateral lexical networks, including phonology, morphology, orthography, semantics, grammar, and collocations. Li and Kirby (2014) argue that depth of vocabulary knowledge is perceived in, at least, the knowledge of multiple connotations of a word, use of collocation and morphological traits. On balance, knowing multi-dimensional associations entails a rich understanding of various meanings and uses in different contexts.

In summary, the current study will use Nation's (2013) Framework and operationalize the concept of vocabulary size and depth. The vocabulary size, also referred to as receptive vocabulary knowledge, involves the number of words the learner knows, at least to some extent. In contrast, the depth of vocabulary knowledge, interchangeably used with productive vocabulary knowledge, involves the quality of the learner's understanding of the individual lexical items.

2.3 Goals of vocabulary learning

The three main goals of vocabulary teaching and learning, according to Aebersold and Field (1997), are to help students: (1) know the vocabulary in the text, (2) recognize vocabulary to make sense of the text, and (3) consider what vocabulary students might need in the future to function with a second or foreign language (L2/FL). According to Catala (2003), the objectives of vocabulary learning are: (1) to learn the meaning of unfamiliar words; (2) to maintain them in long-term memory; (3) to recall them at will; and (4) to utilize them orally or in writing. Westrup (2000) stated that teachers should teach students the definition of a word, how to pronounce it, and how to utilize it. According to Krashen and Terrell (1983), one purpose of learning vocabulary is to offer appropriate vocabulary to allow language use outside of the classroom and put students to continue second language acquisition.

Although different learning objectives can lead to slight differences in choosing materials, methods and techniques in teaching, the common goal of vocabulary instruction should be to improve the student's vocabulary learning. Vocabulary learning goals help in determining the kind of language to be learnt and taught. It is complicated to know all the words in a language, as even native speakers do not know them. The following section will provide information that involves Vocabulary size for second language learners, and Vocabulary size Thai EFL learners need to know.

2.3.1 Vocabulary size for second language learners

Several levels of vocabulary approximately correspond to different fluency levels. Many studies have been undertaken to identify a precise size of vocabulary knowledge that can assist students in understanding when they read texts for receptive skills such as reading and listening (Hirsh & Nation, 1992; Hu & Nation, 2000; Laufer, 1992; Na & Nation, 1985; Nation, 2006; Schmitt, Jiang, & Grabe, 2011). The first vocabulary size criterion was 3,000-word families, which was the minimum required for students to have sufficient understanding when reading texts and to be able to predict the meaning of unknown words from context (Laufer, 1989, 1992; Na & Nation, 1985; Nation, 1993; Nation & Waring, 1997). If students know 3,000-word families, they should know 95 percent of the vocabulary covered in a text, according to Laufer (1992) and Nation (1993). The 5,000-word families were the second

threshold level of vocabulary size that included 98 percent of reading texts (Hirsh & Nation, 1992; Hu & Nation, 2000; Schmitt et al., 2011). According to Hirsh and Nation (1992), knowing 5,000-word families covers 98 percent of vocabulary in simplified texts. As a result, many researchers (Hirsh & Nation, 1992; Hu & Nation, 2000; Nation, 2006) agreed that students should know approximate 5,000-word families as an attainable goal.

Additionally, Nation (2006) investigated how many word families for children were required in order to understand when they watch movies. He discovered that if children had 4,000-word families, they would be familiar with 96.74 percent of the tokens. Additionally, they would be familiar with 98 percent of the tokens if they had 6,000-7,000-word families. Finally, nation (2006) looked at how many words were required to comprehend spontaneous spoken English. He analyzed unscripted spoken English using the Wellington Corpus of Spoken English. He acquired information from talk-back radio and family and friend conversations. The results showed that with 3,000 word family's listeners were able to deal with 95% coverage. Listeners were able to deal with 98 percent coverage with 6,000–7,000-word families. As a result, 6,000–7,000-word families were required to comprehend both scripted and unstructured spoken English.

For productive skills involving speaking and writing, Nation (1990) and Laufer (1992) estimated that around 2,000 of the most common terms would be sufficient for students to communicate in productive speaking and writing abilities. These 2,000 words, according to Newton and Nation (1997), should be mastered as soon as feasible to improve productive skills. On the other hand, students required at least 3,000 high-frequency English words to complete university-level projects (Nation, 1990).

The size of a student's vocabulary is undeniably essential. It appears that in order to perform well in English, students should have a large vocabulary. Students need at least 3,000-word families as a basis for receptive vocabulary in order to comprehend reading texts, and 5,000-word families are the objective that students should work for. The number of necessary word families for the productive vocabulary size is smaller

than the receptive vocabulary size - at 2,000 frequently used words. However, having a large vocabulary is often regarded as advantageous. It is reasonable to expect L2 learners to know approximately 3,000-4,500-word families.

2.3.2 Vocabulary size for Thai EFL learners

In the Thai context, compulsory education includes six years of primary education, Grades 1-6, and 3 years of lower secondary education which is Grades 7-9, according to Thailand's Basic Education Curriculum B.E. 2533 (A.D. 1990), 2544 (A.D. 2001), and 2551 (A.D. 2008) (Ministry of Education, 1990, 2001, 2008). Students who intend to study higher education at the university level must complete the upper education level, or high school, from Grades 10 to 12. As a result, most graduated primary students (Grade 6) have completed six years of English coursework, and university students have completed 12 years of English coursework.

The core curriculum specifies the vocabulary size requirements. According to the Basic Education Curriculum, grade 3 graduates should have a vocabulary of approximately 300-450 words, B.E. 2544 (A.D. 2001) and B.E. 2551 (A.D. 2008). Graduates of grade 6 should have a vocabulary of 1,050-1,200 words. Grade 9 graduates should have a vocabulary of approximately 2,100-2,250 words, while Grade 12 graduates should have a vocabulary of around 3,600-3,750 words (Ministry of Education, 2008).

Additionally, according to the Office of the Basic Education Commission, Ministry of Education, Thailand (Guideline in English Teaching, 2014), primary students are classified as basic users and should have A1 or beginner English knowledge based on The Common European Framework of Reference for Languages (CEFR). Learners with an A1 level of English can understand and use simple communication words in everyday situations, introduce themselves to people, ask simple questions such as "Where are you?" and understand simple conversations. Therefore, based on the Thai Basic Education Curriculum, primary school learners can be classified as A1 level of CEFR.

In conclusion, vocabulary teaching and learning goals can help students remember vocabulary and help teachers consider what vocabulary students might need in the

future to function with a second or foreign language. It is beneficial for teachers to deal with an appropriate number of vocabularies to teach effectively.

2.4 Vocabulary Learning Strategies (VLS)

2.4.1 Definition of vocabulary learning strategy

Vocabulary learning strategies are a part of the general learning strategy. Several scholars define the term 'VLSs' in a different meaning. For instance, Cameron (2001, p.92) described VLSs as "the activities learners perform to help themselves acquire and recall vocabulary items". Additionally, Catal (2003) explains the definition of VLSs as "knowledge about the mechanisms (processes and strategies) used in order to learn vocabulary as well as steps or actions taken by students to (a) find out the meaning of unknown words, (b) to retain them in long-term memory, (c) to recall them at will, and (d) to use them in oral or written mode" (p. 56).

Furthermore, Griffiths (2008) stated that vocabulary learning strategies (VLS) are a subset of language learning methods that have gotten much attention since the late 1970s. Their study has increased our understanding of how people acquire a second or foreign language. Moreover, consistent with Thiendathong and Sukying's (2021) study in the Thai context, Intaraprasert (2004) defined VLSs as "any set of techniques or learning behaviors, which language learners reported using to discover the meaning of a new word, to retain the knowledge of newly-learned words, and to expand their knowledge of vocabulary" (p. 9). Similarly, Sukying (2021) also described learning strategies as conscious behaviours and thought processes selected and used by learners to perform learning actions in a particular context.

Therefore, we can conclude that 'VLSs' have been used to refer to the purposeful steps, actions or mental processes that the learners employ, more or less consciously, to facilitate vocabulary learning. These processes lead to the intervention that enhances vocabulary skills in the target language.

2.4.2 Component of learning strategy

Furthermore, Schmitt (1997) provides an overview of helpful learning strategies use in second language learning. First, he states that the learning strategy consists of 'involve choice'; teachers should consider many strategies instead of using only one

strategy. Secondly, 'be complex'; means each strategy has a lot of steps to follow. Lastly, the strategy should give benefit after training and increase students' vocabulary knowledge.

In addition, there are a number of vocabulary learning techniques in the field of learning strategy. Gu (2003a) proposes an excellent example of a study review on vocabulary learning strategies: 'the choice, use, and effectiveness of vocabulary learning strategies depend on the task, the learner, and the learning context' (p.1). From the study he had reviewed, he states about learning from the context, using the dictionary, note-taking, repetition, word formation, semantics and vocabulary in practice. He observes a person's dependent strategy, especially the skill of learning, learning styles, and genders.

According to Nation (1990, p. 2), Rubin and Thompson (1994, p.79), Richek et al. (1996, p. 203), there are two common ways of learning vocabulary for learners: the direct vocabulary learning approach and the indirect vocabulary learning approach. "Direct or 'explicit' vocabulary learning is involved to intended learning processes when students learn vocabulary very clear, whether in text or individual word, through direct instruction in both the meanings of individual words and word-learning strategies" (Laufer and Hulstijn 2001, p. 1). In direct learning, learners are regularly taught particular words and language structures (Richek et al. 1996, p. 203). This approach to vocabulary learning is essential for learning the core vocabulary - basic and important vocabulary that is used and performed in most situations. This is highly exact for learning basic lexical and semantic knowledge, especially for beginner-level or less successful language learners (Nation, 1990). In contrast, indirect or 'implicit' vocabulary learning relates to learning the meaning of new words implicitly when language learners hear or see the words used in various situations, for example, through daily opportunities, through conversations with others and through reading extensively on their own (Read 2000, p. 39; Laufer and Hulstijn 2001, p.1).

Hence, although students will learn many words from the various classroom language experiences, various instruction of very carefully selected words is required for students to acquire content-specific texts. Through the direct teaching of main words,

students acquire the in-depth knowledge they need in order to know the meaning of words they will encounter.

2.4.3 A taxonomy of vocabulary learning strategies

Several studies have emphasized taxonomies for language and vocabulary learning strategies better to understand the wide range of strategies in various contexts. For example, Schmitt (1997) identified vocabulary learning strategies based on Oxford's (1990) comprehensive taxonomy of language strategies, Strategy Inventory for Language Learning (SILL), which he organized according to Oxford's (1990) categories – memory, cognitive, compensation, metacognitive, affective and social strategies – adding the category of "meaning determination." Additionally, Gu and Johnson (1996) identified metacognitive control and cognitive methods as the two fundamental dimensions of vocabulary learning strategies, divided into six sub-categories: guessing, utilizing a dictionary, note-taking, rehearsing, encoding, and activation.

Moreover, William (1985) classifies five essential learning strategies for studying the meaning of an unfamiliar word in a writing context. It consists of 'inferring from context, identifying lexical familiarization, unchaining nominal compounds, synonym search and word analyses.' What makes all of these interesting; is how to break the unknown word and how each word is involved and interpret them again. Thus, this is quite challenging for second language learners; however, it helps native speakers expand their vocabulary knowledge.

The taxonomy of vocabulary process and learning process are divided into several aspects of knowing a word. In order to make this clear, there is a few examples of taxonomy involved in knowing a word. One of the sources that we can find vocabulary is in a reading text. The context can apply – its written form, spoken form, word parts, meaning, what it refers to, grammar, collocation, and its use. The table below will show the significant divisions of the taxonomy. (See table 2).

Table 2: Nation's (2013) taxonomy of vocabulary learning (pp. 328)

General class of strategies	Types of strategies
Planning: choosing what to focus on and when to focus on it	Choosing words Choosing the aspects of word knowledge Choosing strategies Planning repetition and spending time
Sources: finding information about words	Analyzing words Using context Consulting a reference source in L1 or L2 Using parallels in L1 and L2
Process: establishing knowledge	Noticing Retrieving Generating (creative use)

To illustrate, planning involves 'choosing what to focus on and when to focus on it'. Firstly, 'Choosing word'; in order to learn English effectively, learners should have goals in their minds to decide what vocabulary to focus on and where to find this vocabulary (Barker, 2007). Secondly, 'Choosing aspects of word knowledge to focus on; the aspects of word knowledge which often concentrate on include remembering the word form, knowing its meaning, producing a word in speaking and writing also required. Thirdly, 'Choosing strategies'; there is one of the studies, proposed by Gu and Johnson's (1996) and Kojic-Sabo and Lightbrown (1999) claims that the more learners use a wide range of learning strategies, the more they will get success in learning vocabulary. Anyway, learners should use an appropriate learning strategy for themselves in order to get the best result. Lastly, 'planning repetition' is about repeating the same word repeatedly to recognize the word.

In addition, sources involve finding information about words. There are several sources to learn vocabulary, e.g., the text, dictionaries, movies, etc. Learners should be able to get information about vocabulary in order to learn new vocabulary. Firstly, it involves 'analyzing word part'. Most English words come from French, Latin or Greek, and they are made up of word parts, including affixes and stems. If learners know about affixes and stems, they will see the connection of another word that similar. Another is 'using context'. Gu and Johnson (1996) divide the strategy of using context into background knowledge and linguistic knowledge. 'Consulting a reference source' is also related. They can be divided into written form and oral.

Finally, 'Using parallels with other languages' involves how the word relates to the first language knowledge and already existing knowledge of the second language or even other languages. These parallels can occur in every aspect of word knowledge.

Moreover, processes involve establishing vocabulary knowledge. This category is related to noticing, retrieving, and creative use to help learners remember vocabulary and use that vocabulary. Firstly, noticing; this is the first step before going to the more profound step of processing words. It involves when learners see the words they had learned. Another is retrieving, which involves recalling vocabulary that has already been met or stored. Each retrieval links the cue and the retrieved knowledge. Retrieval can occur in all four skills; listening, reading, speaking, and writing. The creative use involves 'useful instruction' that include; word analysis, semantic mapping, rules-based creative use, a mnemonic strategy such as the keyword technique, and producing the word in all context of the four skills.

Therefore, students can employ several vocabulary learning strategies to improve their vocabulary acquisition. In addition, learners can build a broad and diverse vocabulary by using VLSs.

2.4.4 The effects of training learners on vocabulary learning strategy use

VLSs are important in language acquisition because they help learners improve their vocabulary. Due to the importance of the VLSs, many studies on VLSs use have been conducted. A number of EFL researchers have been constructing vocabulary teaching and learning materials. There are some examples of using vocabulary learning strategies in class in a foreign context. For instance, Syakur (2020) solved students' listening skills by using the dictionary technique. This is classroom action research. He also used note-taking, partial dictation, and cloze dictation as a technique. The data were gathered from listening tests and observation. The result showed that using a dictionary for grade eight students could help them improve their listening skills.

In addition, Limantoro (2018) investigated whether word card games can improve students' vocabulary and grammar for writing. This is classroom action research. The participants were 21 students in their first year in Indonesia. The games included the topic of synonyms, antonyms, comparison, and making a sentence. The finding

showed that most students give positive feedback on word card games in learning English, significantly strengthening their writing skills.

Furthermore, Shokauhi and Askari (2010) also looked at how a contextual guessing technique affected vocabulary and authentic text reading at the pre-university level. One hundred students were selected randomly and separated into two groups. The first group received CGS instruction with context, while the second group was treated by a direct method with non-context. The results revealed that the CGS was more effective in increasing students' reading skills than direct instruction and non-context methods.

Besides, there are some examples of using vocabulary learning strategies in the Thai context. For instance, Siriganjanavong (2013) explored the effectiveness of the "Mnemonic Keyword Method" ("MKM") to low proficiency English learners in terms of short-term and long-term retention. The participants were 44 students studying in their first-year university. They were given 40 target words, with half of them taught using MKM and the other half with mixed methods, namely contextual clues, word structure analysis, and opposite word pairs. The instruments included a 40-item-vocabulary test and two cued-recall sheets to measure students' retention. The findings of the vocabulary test and cued-recall sheets indicated that the mnemonic keyword strategy might be superior to other strategies for recalling information in both short- and long-term memory.

In conclusion, the findings of studies showed that VLSs are beneficial in different situations and give positive results. Besides, those studies have focused on adult learners such as at the junior high school level (Syakur, 2020), high school level (Shokauhi and Askari, 2010) and the university level (Siriganjanavong, 2013; Limantoro, 2018). In addition, several studies conducted different vocabulary learning strategies to teach students, such as using the dictionary, context clues, memory strategies, etc. In the Thai context, using the word part is still under research; thus, it is worthwhile to explore the word part strategy, especially for young learners that the information will be described in the next section.

2.5 Word parts strategies

2.5.1 Word parts; prefixes, base words, and suffixes

According to Nation (2013, pp.389), most English words can be changed by adding affixes, including prefixes and suffixes. Affixes can be divided into two types; inflectional and derivational. All the inflectional affixes are suffixes. In addition, derivational affixes consist of prefixes and suffixes. The difference between inflectional and derivational is that inflectional does not change the part of words after they are added. Some of the inflectional affixes are *-s* (plural), *-er* (comparative), *-ed, -ing, -est* (superlative).

However, derivational affixes include prefixes and suffixes. Some prefixes and most suffixes can change the part of speech after adding them. For example, prefix; *able* (verb)/ *unable* (adjective), while suffix; *happy* (adjective)/ *happily* (adverb), *kind* (adjective)/ *kindly* (adverb). Besides, some affixes, especially prefixes, can change the word's meaning after adding them, such as *happy/unhappy, fear/fearless, kill/killer.*

In addition, there are two kinds of word stems; free form and bound form. The free form refers to words that can stand alone, such as *fear/fearless*. In comparison, bound form refers to the rest of words that cannot stand alone, such as *re-*; *replay, rematch, reuse.*

Nation (2013, pp.390) mentions that there are two reasons that we should focus on word parts. Firstly, prefixes and stems can help learners relate meaning with another word to know a new word. The latter is when learners know about prefixes and suffixes; they can see the relationship of the word family, which shares some of the members. Thus, these two reasons can help the learner recognize and relate vocabulary.

There are plenty of prefixes and suffixes, but what are the most valuable prefixes and suffixes. This idea starts with Thorndike's (1941). He studies 90 English suffixes and makes use of word frequency. As a result, Thorndike's monograph is a beneficial source of information about suffixes, especially in the written English context. Furthermore, Bauer and Nation (1993) create seven levels of affixes based on the criteria of frequency, regularity, productivity, and predictability. In addition, several

researchers examine the frequency of the affixes with no consideration (Stauffer, 1942; Bock, 1948; Harwood & Wright, 1956; Becker et al., 1980). Finally, these studies indicate very useful affixes stages that appropriate level of learners. (See Table 3).

Table 3: A sequenced list of derivational affixes for learner of English (Nation, 2013, p.395)

Stage 1
-able, -er, -ish, -less, -ly, -ness, -th, -y, non-, un-

Stage 2
-al, -ation, -ess, -ful, -ism, -ist, -ity, -ize, -ment, -ous, in-

Stage 3
-age (leakage), -al (arrival), -ally (idiotically), -an (American), -ance (clearance), -ant (consultant), -ary (revolutionary), -atory (confirmatory), -dom (kingdom; officialdom), -eer (black marketeer), -en (wooden), -en (widen), -ence (emergence), -ent (absorbent), -ery (bakery; trickery), -ese (Japanese; officialese), -esque (picturesque), -ette (usherette; roomette), -hood (childhood), -i (Israeli), -ian (phonetician; Johnsonian), -ite (Paisleyite; also chemical meaning), -let (coverlet), -ling (duckling), -ly (leisurely), -most (topmost), -ory (contradictory), -ship (studentship), -ward (homeward), -ways (crossways), -wise (endwise; discussion-wise), anti- (anti-inflation), ante- (anteroom), arch- (archbishop), bi- (biplane), circum- (circumnavigate), counter- (counter-attack), en- (encage; enslave), ex- (ex-president), fore- (forename), hyper- (hyperactive), inter- (inter-African, interweave), mid- (mid-week), mis- (misfit), neo- (neo-colonialism), post- (post-date), pro- (pro-British), semi- (semi-automatic), sub- (subclassify; subterranean), un- (untie; unburden).

Stage 4
-able, -ee, -ic, -ify, -ion, -ist, -ition, -ive, -th, -y, pre-, re

Stage 5
-ar (circular), -ate (compassionate; captivate; electorate), -et (packet, casket), -some (troublesome), -ure (departure, exposure), ab-, ad-, com-, de-, dis-, ex- ('out'), in- ('in'), ob-, per-, pro- ('in front of'), trans-

Stage one to four is based on levels three to six of Bauer and Nation (1993). The last stage is based on Stauffer (1942), Bock (1948), and Harwood & Wright (1956) which analyze Thorndike lists. Teachers can select these levels of word that are suitable and appropriate for learners. Stage 1-5 are used as these affixes provide a basis for the methodical learning and teaching of English affixes at different levels of morphological awareness and are a widely accepted description of a word-building device.

However, we already know about the lists of valuable affixes; then, the most valuable items will be discussed next. The stems can be bound or free form. To illustrate, free form occurs with no affixes, whereas bound form occurs with a prefix or a suffix. If the stems include many affixes, it makes a large number of words. That means it is worth paying attention to. Here are some examples. (See Table 4)

Table 4: Nation (2013) Word stems and affixes (pp. 401)

-PORT- means to carry		
Prefixes	**Stem**	**suffixes**
ex- *im-* *trans-* *re-* *sup-* *de-*	*-port-*	*-able* *-er* *-ation* *-ive*
(Other useful words with port: important, insupportable)		

In order to make use of word part strategy, for receptive use, learners need to recognize a complex word such as *unhappiness* is made up from *un-, happy, -ness.* These can relate to other words such as *kindness, sadness, unknown, unkind.* Additionally, learners need to see the meaning of affixes and stem when it combines; e.g., *unhappy* is made up from *un-* and *happy*, which *un-* means not; therefore, the sense of this word is not pleased. Finally, learners need to be concerned about the change of form when affixes are added for productive use. These changes can affect the pronunciation and the written form.

Additionally, as mentioned previously, word parts consisted of stems and affixes (prefix and suffix), and each of them will be clarified more in the following section.

Root, Base, and Stem

The word "base," which is also known as "root" or "stem," is used frequently, and these three terms "designate that part of a word that remains after all affixes have been removed." (1983 Bauer) A distinction has been made between these three concepts to avoid confusion and to clearly distinguish inflectional and derivational actions (Plag 2003; Bauer 1983, 2002).

1. A base refers to a single morpheme (or a group of morphemes) to which inflectional or derivational affixes can be added to construct a complete

word. For example, when the prefix "*un-*" and the suffix "*-ily*" are joined to form unhappily, the word happy serves as the base. The word "*happy*" is a base word that can be used alone or with different beginnings and endings to vary its meaning or use, such as *unhappy, happiness*, and *joyfully*. Although not all bases are stems or roots, stems and roots can be based.

2. A root word is a base word that is usually a free morpheme that cannot be broken down into morphemes by derivation or inflection. It carries the main part of a word's meaning, which is more particular than a prefix or suffix that is added to produce a complete word in English, just as a base word. In English, there are two types of roots: PREL, 2008; Jeffries & Mikulecky, 2012).

   a. Roots that can be used as a single word. When all the affixes, such as the prefix *"un-"* and the suffix *"-ily,"* are removed from the word *unhappily,* what remains is *happy*, which works as the root because it cannot be further broken into meaningful parts.

   b. Roots that cannot stand on their own in English are usually borrowed from other languages, such as Latin or Greek. *Struct*, for example, is a root word that means "to build or form." On the other hand, the *struct* is not a word in and of itself. *Construction, destruction, obstruction,* and other word parts, for example, must be added to make this a word. A few root words can stand alone, such as *meter, script, and port*. However, most root words require the addition of additional letters to produce a useable term. A list of common roots that help increase vocabulary knowledge is provided below.

Table 5: Example of stem commonly found in the text

Root	Examples
write	rewrite, writer
act	actor, action
play	replay, display, player, played
agree	disagree
read	reads, reader

Affixes

Affixes are bound morphemes in English that are separated into sub-classes based on whether or not they connect to the stem. Affixes are classified into three groups based on their position in a word: prefixes, suffixes, and infixes. Kastovsty, 1982; Plag, 2003; PREL, 2008) (Bauer, 1983; Crystal, 2008; Kastovsty, 1982; Plag, 2003; PREL, 2008); however, because an infix is very uncommon in English, only prefixes and suffixes will be explored. A prefix is a term that appears at the beginning of a root or base word. A suffix is the word part at the end of a root or base word. More than half of all English words share a typical prefix or suffix or are compound words, according to Stahl & Kapinus (2001).

Prefixes

Prefixes are meaningful parts of words added to the beginning of a root or base word to change its meaning. Prefixes have meanings, and they add those meanings to the root or base word's meaning. For example, the base word polite is changed to "not polite" by adding the prefix "im-," which means "not." A list of frequent prefixes that are commonly use is provided below. (See Table 6)

Table 6: Examples of the most common prefixes

Prefix	Definition	Examples
un-	not, opposite, reverse of	unclear, unhappy, unafraid, unsafe, unusual
re-	again, back	reapply, redesign, rewrite
in-, im-	not, opposite of	impatient, impossible, impolite, indirect
dis-	not, opposite of	discover, dislike
en-	cause to, in, cover	enjoy, entertain

Suffixes

A suffix is a meaningful part of a word that is added to the end of a root or base word to change its meaning, though it is often quite similar to the original meaning. A suffix contributes words essential structure and meaning, and a suffix can:

- change the part of speech, for example, *read* (verb) – *reader* (noun).
- change a noun from singular to plural, for example, *bat* (singular) – *bats* (plural).
- change the verb tense, for example, *look* (present) – *looked* (past).
- establish a relationship or role of a person, for example, *trainer* (a person) – *trainee* (someone who is trained to do something.)

- show a difference in quantity, for example; *less - lesser, few - fewest.* Provided below is a list of common suffixes that commonly use. (See table 7)

Table 7: Examples of the most common suffixes

Suffix	Definition	Examples
-s, -es (plural)	more than one	books, boxes
-ed (past tense)	in the past	walked, played, watched, helped
-ing (present tense)	in the present	playing, watching, helping
-ly (adverb)	characteristic of	carefully, friendly, happily, loudly, lovely, quickly, slowly, smoothly
-er, or, ist, ian, eer (noun)	someone who; does/what/that /which	eraser, teacher, singer, actor, doctor, artist, cyclist, dentist, librarian, technician, engineer

To summarize, word parts consisted of base word or root, and affixes (prefix and suffix). A base word comes with a prefix or a suffix in order to create a new form of word. A prefix is a word part attached to the beginning of a word or base word. A suffix is a word part attached to the end of a word. Therefore, it is beneficial for learners to know how to use their understanding of prefixes, suffixes, and root/base words to unlock the meaning of words.

2.5.2 What is a word part strategy for remembering new words?

According to Nation (2013, pp. 408), he divides word part strategy into two steps: 'Break the unknown word into parts' and 'Relate the meaning of word parts to the meaning of the word'. To illustrate, the first step, learners need to remember the form of prefixes or suffixes when it combines into words. The latter, learners need to be able to know the meaning of words when it combines affixes and stems. For instance, the teacher is made up of teach and *-er* (a person); therefore, '*teacher*' means someone who teaches someone or something.

There are many ways to introduce prefixes or suffixes to learners to make them familiar with new words. Most importantly, learners should know the meaning of the most common prefixes and suffixes. However, the learning procedure depends on how teachers will create or design their classroom activities. In order to see the students' progress, the time should be set, and simple tests should be provided to the students.

After finishing the lessons, the productive activity should be provided such as games, bingo-type games (Bernbrock, 1980), "Word-making and word taking (Foutain, 1979) or analysis activity (Nation, 1994: 182), or using technology and so on, to help students to establish the knowledge. To illustrate, 'word-making and word taking encourage students to combine affixes cards and stems to make a new word. Besides, analysis activities involve students breaking words into parts, group the similar part together, and match the words with their meanings. Depending on the situation, teachers can let them work in pairs, in a group, or even the whole class. Here are some classroom activities suggested by Nation (2013, pp.410). He proposes that learners can teach their friends in pairs. One supposes to be a teacher, and another is a learner. The teacher has a list of words with their prefixes and meanings (See table 8). Both of them fold the paper; they can only see the meaning. Then 'teacher' says a word, e.g., forename, and wait for 'student' to find the meaning. The 'teacher' gives 'student' three chances to tell the answer then the correct answer will be revealed.

Table 8: A list of prefixes for a pair learning activity (Nation, 2013; pp.409)

Prefix	Meaning	Example word
fore-	Before	*Forename*
bi-	Two	*Biplane*
ex-	Former	*Ex-teacher*
mid-	Middle	*Midweek*

Besides the concept of word part strategy, there are many techniques related to the teaching of vocabulary. However, English teachers need to be concerned about presenting a new vocabulary to their students in order to facilitate students recognising new vocabularies. Therefore, it needs to be learnt, practised, and revised to prevent students from forgetting. Each technique used by teachers depends on factors such as the content, time availability, and its value for the learners. This makes teachers have some reasons for applying specific techniques in presenting vocabulary.

Therefore, word parts strategies involve breaking words down into components and constructing words. Students can enhance their vocabulary by learning word parts because they correlate them with more related vocabularies.

2.5.3 Types of vocabulary activities and procedures

The vocabulary learning activities in the aspect of form will be described, especially about teaching word parts. Various teachings and learning vocabulary activities can

be delivered to students; the examples will be shown as follows: here are some activities suggested by Nation (2013, pp.129-131).

Table 9: A range of activities for vocabulary learning (Nation, 2013: 129-131)

		Activities
Form	Word part	Filling word part tables
		Cutting up complex words
		Building complex words
		Choosing a correct form
		Finding etymologies

To illustrate, first is **'Filling word part table'**. Learners can work in pairs or groups or individually to complete tables like the following. Not all spaces can be filled. Learners are required to classify the word given to part of speech. Teachers can ask them to check the answer with another pair before telling them the response, as shown in the table below.

Table 10: Filling word part table

Noun	Verb	Adjective	Adverb
teacher			
	teach		
		unhappy	
			happily

The focus word will be given to the students – make sure the selected words are unknown words. Then, ask students to fill the word in the table. The very first questions can be basic ones for drawing students' attention and curiosity to learn; for example, "Guess whether it is noun, verb, adverb, or adjective?", "Why do you think it is noun or verb?", "How can you know that?".

'Cutting up complex words'; a list of words will be given to the students and divided into parts. They can be asked to give the meaning of some of the parts. This is the way students can learn to identify and specify the parts. The teacher can write the vocabulary on the board and separate the word into parts; for example, recall = *re-* + *call*. Then write another word using *re-* as a prefix and let students try and practice again.

'Building complex words'; learners are given word stems and make negatives from them or make vague words (using *-ish, -y, -like*). To build the complex words, firstly, the teacher introduces the meaning and function of each part. In this stage, students have to analyze the word given and break it into parts: *re-* is a prefix meaning

"again", *-vis-* is a root meaning "to see". Then the teacher gives the example of analyzing words. After knowing, analyzing and recognizing the word parts, the students will encourage to connect and guess the meaning of the whole word regarding the previous knowledge. So, what students need to remember is the stem and then how to put the prefixes and suffixes.

'Choosing the correct form'; Learners are given sentences consisting of a blank and a word stem in brackets. They have to change the stem to the appropriate inflected or derived form to complete the sentence. For example;

I am a _____ (teach).

The word in the bracket is taught, so the student must change the stem to the correct form. For example, in this sentence, to make the complete sentence, the answer is 'I am a *teacher*.'

'Finding etymologies'; etymology refers to the origin or derivation of a word (also known as lexical change). Learners need to look up etymologies in dictionaries to see how new words are related to those they already know. The teacher introduces Latin roots to students using fun activities in this stage. These activities, as mentioned in previous is a productive activity for students to learn and practice new words. Teachers can present in several ways such as using a root word tree, word card, doing a role play, mime, playing a word guessing game, using pic-to-word, etc. At the same time, the students can also encourage the class to learn via technology if other students or the classroom facilities provide them with the devices to connect to the internet; for example, they can use Kahoot to facilitate the games or activities.

To summarize, it is essential to note that the word part technique is not a way of guessing unknown words from context. Instead, it is helpful if learners guess the meaning of a word from context or look it up in the dictionary to find its meaning, and then apply the word part technique to emphasize the word last in their memory. The word part technique is a strategy to help learners to recognize the meanings of new complex words. It is beneficial to relate what is already known to what needs to be learned in order to gain more vocabulary size.

2.6 Related studies

To date, many studies have been done using the word parts to investigate students' vocabulary knowledge. This section will outline previous studies in word knowledge using word part strategy, including studies in foreign and Thai contexts.

Karliova (2009) examined teaching English vocabulary by using the Latinate word parts technique. The samples were undergraduate students learning English as a foreign language. This study conducted a pre-test, a lecture on Latinate word parts, a post-test (same test as post-test) and an interview. These instruments were administered to first-year students to assess their knowledge of Latinate English words, and only the treatment group received instruction on the Latinate word parts. This study showed a statistically significant difference between the post-test scores of the treatment and the freshman control group students, which suggests that Latinate word-part instruction has a positive effect on English vocabulary acquisition.

Kim Cholo (2013) investigated what vocabulary learning works best for non-native speakers. This is an experimental study. The author chose two groups of students using different vocabulary learning: learning prefixes and suffixes formally and learning incidentally without using the knowledge of affixation. This study took over ten weeks. The participant included 54 university students in Korea. The author used pretest and posttest in order to see the results of both vocabulary learning. Finally, the results found that students who learned through affixes knowledge can memorize more vocabulary and know the meaning faster than another group.

Liu Xinjie (2011) studied using a word part strategy to help learners understand words and facilitate vocabulary acquisition. The samples were ten teacher trainee students from a university in Sweden. The instruments in this study were a vocabulary pre-test, a lecture about word-formation rules, two vocabulary tests and a questionnaire. The results revealed that the word part strategy is beneficial in understanding words and facilitating vocabulary acquisition. Another study investigated the effects of morphemic strategy to analyze and predict the meaning of words with the two groups of students in high school and found a positive effect of the morphological analysis strategy and a mnemonic strategy (Harris et al., 2011). The finding also showed that

both strategies could help students analyze and create the meaning of unknown words. More importantly, these strategies were helpful for students while reading assignments and reading tasks.

Masumeh Taie (2015) investigated the relationship between critical thinking and guessing the meanings of familiar and unfamiliar medical terms by using the word part analysis strategy. The instruments were the multiple-choice test consisting of familiar and unfamiliar terms. This study showed a more robust and positive relationship between the critical thinking test and the test of unknown words. Furthermore, as the findings of this study indicate, there is a significant positive correlation between the students' scores on the comprehensive critical thinking test and the test on unfamiliar words.

Furthermore, Melissa Jean Cook (2016) studied whether learning about affixes (prefixes and suffixes) through games and songs helps English Language Learners (ELLs) understand the meaning and function of affixes. The participants of this study were third-grade students. The study used mixed method research, drawing on both quantitative and qualitative research paradigms. This study looked for solutions to problems and could improve the quality of teaching ELLs through the lessons developed for this paper. The primary technique used in this research is testing. Students were given a pretest before the teaching, and then students practiced the prefixes and suffixes in the classroom through activities, games and songs. After that, the students took the final posttest. The findings showed that learning about affixes through games and songs was very helpful and supported students' motivation. Anyway, the limitation of this study is the small group of participants.

In addition, Mounir Harraqi (2019) investigated how word part strategy can help students understand words and acquire vocabulary. The participants were fifty students from Morocco engineering school. All participants were given a pre-test, shorts lectures about word formation rules, and two vocabulary tests. The findings confirm the hypothesis at the beginning of the study that the findings of the experimental group outperformed the control group, which claimed that vocabulary learning would gain or increase after using the word parts strategy. Results of the data

suggested that word part strategy can assist students in working out most words and expanding their vocabulary.

In the Thai context, Nirattisai (2014) investigated the relationship between vocabulary learning strategies and vocabulary size. The participants were 257 University students. The instruments used in this study were vocabulary learning strategies questionnaires and the English-Thai version of the vocabulary size test. As a result, the finding showed that the participant's use of the overall learning strategies was moderately correlated with their vocabulary size.

Pookcharoen (2010) reviewed the importance of vocabulary instruction for ELT students. The study presented the ways students learn vocabulary in effective ways and ineffective ways. The author analyzed the vocabulary instruction that most teachers used to teach in Thailand and introduced effective vocabulary instruction. The author suggested that one of the most effective learning vocabulary instructions was identifying the meaning of new words or unfamiliar words. This kind of instruction could help learners gain more vocabulary and retention.

Kaewsawas and Suksawas (2020) investigated the prefix knowledge focus on 'in- and im-' and the ability of EFL students to distinguish the meaning of words. The participants were 65 third-year students. The instruction on prefixes was provided to these students. The tests were used to measure the student's knowledge. The results showed that most students could apply the prefix knowledge that they had learned in class to distinguish the meaning of the same prefixes with different meanings. Similarly, Sukying (2020) examined the effects of affix instruction on acquiring morphological complex words. The participants were 92 university students. They were divided into two groups. The treatment group was provided with the explicit teaching of affix knowledge, whereas the control group was not. To measure students' affix knowledge, they acquired to take the tests. The data were analyzed using a repeated-measure ANOVA. The result showed a positive effect of affix instruction in the English language classroom. Another study by Notasee and Sukying (2020) investigated L2 word learnability to understand word knowledge aspects, including form, meaning, and use. The participants were 261 Thai EFL high school learners.

They were required to do the six tests which aimed to measure both receptive and productive dimensions. Finally, many findings revealed and can be concluded that multiple aspects of word knowledge (form, meaning, and use) together are more useful in vocabulary acquisition than a single knowledge alone.

In conclusion, the findings of the previous studies provide empirical evidence that many related aspects of word knowledge can facilitate vocabulary acquisition and language development. These findings support that word part strategy instruction is helpful and increase students' vocabulary acquisition. The similarity of the previous study showed positive effects of teaching word part by using several learning strategies, and participants were a large group, their age is more than 12 years old. However, this study focused on using the word part strategy for primary school children in the Thai provincial school context.

2.7 Summary

To facilitate learners in acquiring vocabulary, several things need to be considered. Learners need to know the vocabulary as much as possible to reach their goals of learning English. One of the key successes in helping them learn vocabulary effectively is learning strategy. The more learners use different learning strategies, the more they gain vocabulary. Besides, teachers can choose appropriate instruction to teach learners and help them remember more vocabulary. Many studies reveal that one of the most valuable instructions for teaching vocabulary effectively is word part instruction. It includes analyzing words and combining words. When students know how to interpret words and combine words, they can learn more vocabulary. They can adapt to the four skills; reading, listening, reading, and writing. Besides, the learning activity based on word part strategy brings students a positive attitude toward learning English.

CHAPTER III
RESEARCH METHODOLOGY

This study examines the effects of word parts strategy instruction on vocabulary knowledge among primary school students in a Thai EFL context. It also explores primary school students' attitudes towards the impact of the word parts strategy instruction on their vocabulary knowledge acquisition. The present chapter outlines the research methodology of the current study, including the research design, the participants and setting, the research instruments, as well as data collection and analysis procedures.

3.1 Research design

The current study was a quasi-experimental research design focusing on the analysis of numeric data. The underlying rationale was to determine whether word part strategy instruction improved the quality of vocabulary learning among primary school students. Participants were from classrooms in two different schools. Both groups were given the three tests in the first week, followed by different strategy instruction for 16 hours with the same vocabulary list. At the end of the strategy instruction, all participants were given the three tests again. The questionnaire was given only to the experimental group, as shown in Table 11.

Table 11: Research design

Group	Vocabulary tests	Treatments	Vocabulary tests	The Attitude Questionnaire
Experimental group (*N*=27)	✓	16 hours of word parts strategy instruction	✓	✓
Control group (*N*=25)	✓	No teaching on word parts strategy instruction	✓	

The two groups only differed in the nature of the strategy instruction provided over 16 hours. The experimental group received 16 additional hours of word parts strategies instruction. The classroom activities began with a warm-up, followed by instruction, practice, a production stage and, finally, a wrap-up. The word part strategies

instruction included analyzing words and building words with morphemes. By contrast, the control group received no instruction on word parts strategy. Instead, the teacher provided students with general instruction; that is, the teacher did not focus on word parts, analyzing words, or building up words. For example, when a teacher introduced vocabulary to students, they could write the word on the board and let students pronounce and guess the meaning.

3.2 Participants and setting

3.2.1 Participants in the main study

The current study was conducted at a primary school under the administration of a government institute in the northeast of Thailand. The participants included 52 Thai students in the sixth grade of primary school. Participants were selected from two schools where students have a basic level of English. Based on the overall scores of the Ordinary National English Test (O-NET) of these schools, their English capacity was around A1 of CEFR. The classroom size of each school is relatively small, but the two schools have similar contexts, including teachers who graduated from English majors, as well as similar textbooks, the number of hours of teaching English per week, and the grade point average for English.

One classroom from the first school was selected as the experimental group. This classroom included 27 students (10 males and 17 females). The classroom from the second school, located five kilometres away, was selected as the control group. There were 25 students in this classroom, including 13 males and 12 females. In both classrooms, all participants used their L1 to communicate with their friends or classmates at school, and none of the students had studied English in an English-speaking country.

All participants received an average of four hours of English instruction per week over four classes. In addition, there was a computer room at the school where students could access English resources. They could also access English language media by themselves, including the internet, news articles, movies, radio, and television. However, the likelihood that students access such resources was rare given their inability to autonomously understand English media. Moreover, most of the

participants' parents work in Bangkok, Rayong and Chonburi and, therefore, many of the students stayed with their grandparents or their relatives outside of school hours. The participants reported that they liked to watch T.V, go to the farm, and play mobile games in their spare time.

3.3 Research instruments

The instruments included three tests and a questionnaire. The three tests were the word segmentation test (WST), the L1 translation test (L1TT), and the word parts test of use (WPT). According to the theoretical framework of Nation (2001), vocabulary knowledge is composed of three aspects: form, meaning, and use. Thus, the word segmentation test was designed to measure the aspect of 'form', the L1 translation test measures 'meaning', and the word part test assesses 'use'. The questionnaire was designed to measure students' attitudes. Participants were given 40 minutes for each test and 10 minutes to complete the questionnaire.

3.3.1 The Word Segmentation Test (WST)

The word segmentation test was designed and developed based on Nation (2013, pp. 405) to measure the aspect of word form. The test included 20 items. Participants were required to break down word components into smaller morphemes, the smallest meaningful part of a language. Each correct morpheme provided was awarded one point. No points were awarded for no answer or an incorrect answer. The scoring criteria of the word segmentation task are shown in Table 12 (see Appendix A for further details).

Table 12: An example from the Word Segmentation Test

Instructions: Break down a word into the smallest parts. (**คำชี้แจง** ให้นักเรียนแยกส่วนประกอบของคำที่กำหนดให้)

Examples		Scoring
1.	safety = safe + ty (ความปลอดภัย)	2
2.	safety = saf + ty (ความปลอดภัย)	1
3.	unsafety = un+ safe + ty (ไม่ปลอดภัย)	3
4.	unsafety = unsafe+ty (ไม่ปลอดภัย)	2
5.	unsafety = uns + safet + y (ไม่ปลอดภัย)	0

3.3.2 The L1 Translation Test (L1TT)

The L1TT was developed based on Laufer and Goldstein (2004) and Webb (2005, 2009). This test measured students' knowledge of the meaning aspect and included 20 items. The instructions encouraged the students to recall the meaning of each prompt word. Students were given the Thai words and were asked to write English vocabulary. The first letter of the target words was provided to ensure that there was only one correct answer for each target word. An accurate word definition was awarded one point, and no points were given for no answer or an incorrect answer. Half points were also awarded if part of the morpheme was correct. An example of this test is shown in Table 13 (see also Appendix B).

Table 13: An example from the L1 Translation Test

Word	Answer	Correct Answer	Scoring
1. นักเขียน	*Writing*	Writer	0.5
2. อย่างมีความสุข	*Happly*	Happily	0.5
3. คุณครู	*Teacher*	Teacher	1

3.3.3 Test of Word Part Use (TWP)

The test of word part use was designed and developed based on Hayashi and Murphy (2011) to measure learners' knowledge of word parts in use. The test involved filling in the blanks using the cue provided in brackets. Specifically, students were asked to supply a correct form of a word for each blank in the sentence and provide the syntactic class for the derived word. No points were awarded for no answer or an incorrect answer. One point was awarded for one correct part. Two points were awarded for the correct response, including a correct form in context and a correct type of word. An example of the word part use test is shown in Table 14 (see also Appendix C).

Table 14: An example from the test of Word Part Use

Instruction: Write a correct form of a word provided in the blanket for each blank in the sentence. Please also specify the part of speech for the word you provided. (นำคำศัพท์ที่กำหนดให้ในวงเล็บมาเติมลงในช่องว่างให้ถูกต้อง พร้อมทั้งระบุชนิดของคำ)

No.	Sentence	Part of speech				Scoring
		n.	v.	Adv.	Adj.	
E.g.	She *is <u>calling</u>* her friends. *(call)*		/			*2*
E.g.	This is *a <u>ruler</u>. (rule)*	/				*2*
1.	An ……..*interview*……… (*interview*) is in the office.	/				*1*
1.	An ……..*interview*……… (*interview*) is in the office.		/			*0*

3.3.4 Attitude Questionnaires

The questionnaire was adapted from Yamashita (2013) and included 15 items. Participants in the experimental group were asked to respond to the questionnaire items using a 5-point Likert scale (Likert, 1982), ranging from strongly disagree (1) to strongly agree (5). The questionnaire was translated into Thai by a certified English-Thai translator. The Thai version of the questionnaire was given to all participants to avoid any language barriers. Table 15 shows some examples from the Thai version of the questionnaire.

Table 15: Example questions from the Thai version of the questionnaire

คำชี้แจง ให้นักเรียนทำเครื่องหมาย (/) ลงในช่องที่ตรงกับความรู้สึกหรือความคิดเห็นของนักเรียน แต่ละคำถามนักเรียนสามารถตอบได้เพียงคำตอบเดียวเท่านั้น

ข้อความ	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่แน่ใจ	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1. ฉันรู้จักคำศัพท์เพิ่มมากขึ้นหลังจากเรียนด้วยกลวิธีการแยกหน่วยคำ					
2. สื่อการสอนเหมาะสมกับเนื้อหาที่สอน					

3.4 Test development

To find out the comparison between word part strategy instruction and without emphasizing word part strategy on the students' vocabulary knowledge, the researcher administered the vocabulary tests, namely the L1 translation test, word segmentation test, and Test of word part use, to assess students' vocabulary knowledge in three aspects; form, meaning, and use. The test was administered before and after the instruction. Each test consisted of 20 questions. All the vocabulary was selected from students' textbooks for grade 6. The procedure when developing the tests begins with specifying the purpose of the tests, followed by the researcher creating the test items and scoring rubrics. After that, the tests were reviewed and pilot the test items. Finally, all items were evaluated the quality items by experts. The criteria for selecting the target prefixes and suffixes and selecting vocabulary for teaching in the current study were described in the following section.

3.4.1 Selecting the target prefixes and suffixes

The vocabulary used in the current study was selected using the 'Smile Book Grade 6' and the New General Service List (NGSL). The affixes taught in the study were 17

affixes from Bauer and Nation's (1993) list of affixes, ranging from Levels 2 to 7 (see Table 16). Specifically, the affixes *-s, -es, -ing -er, -or, -ly, -ist, -al, -able, -ful, -ness, -ous, -ment, -ity, re-, un-, dis-* were chosen based on their regularity (i.e., how much the written or spoken form of the root or affix varies as a result of affixation) and frequency (i.e., the number of words in which the affix occurs). All affixes included derivational and inflectional affixes.

Table 16: Bauer and Nation's (1993) list of affixes

Level 1	Base words
Level 2	Base words + inflections *-s (on noun or verb), -ed/ -ing (on verb), -er (er2)/ -est (on adjective), -th (on number), and -en (on irregular verb)*
Level 3	Frequent and regular affixes *-able/ible, -er/-or (on verb), -ish, -less, -ly, -ness, -th, -y,* *non-, un-*
Level 4	Frequent orthographically regular affixes *-al (autumnal), -ation (admiration), -ess (fortress), -ful (plentiful), -ism (dogmatism), -ist (semanticist), -ity (solemmnity), -ize (serialize), -ment (armament), -ous (fibrous)* *in-, im-*
Level 5	Less frequent but regular affixes *-age (leakage), -al (arrival), -ally (idiotically), -an (American), -ance (clearance), -ant (consultant), -ary (revolutionary), -atory (confirmatory), -dom (kingdom; officialdom), -eer (black marketeer), -en (wooden), -en (widen), -ence (emergence), -ent (absorbent), -ery (bakery; trickery), -ese (Japanese; officialese), -esque (picturesque), -ette (usherette; roomette), -hood (childhood), -i (Israeli), -ian (phonetician; Johnsonian), -ite (Paisleyite; also chemical meaning), -let (coverlet), -ling (duckling), -ly (leisurely), -most (topmost), -ory (contradictory), -ship (studentship), -ward (homeward), -ways (crossways), -wise (endwise; discussion-wise),* *anti- (anti-inflation), ante- (anteroom), arch- (archbishop), bi- (biplane), circum- (circumnavigate), counter- (counter-attack), en- (encage; enslave), ex- (ex-president), fore- (forename), hyper- (hyperactive), inter- (inter-African, interweave), mid- (mid-week), mis- (misfit), neo- (neo-colonialism), post- (post-date), pro- (pro-British), semi- (semi-automatic), sub- (subclassify; subterranean), un- (untie; unburden).*
Level 6	Frequent but irregular affixes *-able (inscrutable), -ee (lessee), -ic (spastic), -ify (mollify), -ion (superstition), -ist (solipsist), -ition (transition), -ive (restive), -th (breadth), -y (calumny),* *pre-, re-*
Level 7	Classical affixes *-ar (circular), -ate (electorate), -et (packet, casket), -some (troublesome), -ure (departure, exposure)* *ab- (abnormal), ad- (admixture), com- (commiserate), de- (demist), dis- (disintegrate), ex- (out - external), in-(in - internal), ob- (obsequious), per- (perspective), pro- (in front of - procede), trans- (transmogrification)*

3.4.2 Selecting the prompt words for the current study

Laufer and Nation (2012) proposed that frequency, usefulness, and learnability or difficulty should be the criteria used to select prompt words in vocabulary research.

As such, the vocabulary in the present study was chosen from 'Smile Book Grade 6', and the vocabulary was selected to cover every unit of the book. The specific method used to select the prompt words was the following:

1. The teacher studied the overall objectives of the main English language course, E16101 and then synthesized the goals to select the vocabulary.

2. Prompt words were selected to cover every unit. The prerequisite for selecting these words was that prefixes or suffixes could be added to each prompt word. The total number of words chosen was 154 (see Table 17).

3. After checking these 154 words against the New General Service List (NGSL) (Browne, Culligan, & Phillips, 2013), 100 prompt words remained. The vocabulary in the NGSL includes approximately 2,000 high-frequency words for second language learners that cover over 92% of most general English texts. Thus, it is beneficial for L2 learners to know the words on this list

4. The vocabulary checklist test of 100 words was then created and piloted to students in different groups with a similar context to test if the vocabulary was appropriate. Students were required to indicate whether or not they knew the meaning of each word.

5. After the vocabulary checklist was piloted, the students' least and most known words were excluded from the tests, as reported by the students. However, all 100 words were selected to teach students in the classroom.

6. Finally, the teacher designed the tests and lesson plans. The lesson plans included 16 hours of word part instruction.

Table 17: The vocabulary selected from Smile Book Grade 6

Unit	Objectives	Vocabulary	After Checked the NGSL remains	Hour
1	- To talk about personality and jobs	subject, animal, place, occupation, job, careful, friendly, repeat, kind, bossy, confident, year, want, meet, talk, thing, national, do, actor, artist, writer, computer, programmer, musician, play, picture, work, help, paint, reason, parent, skateboard, report	subject, animal, place, job, care, friend, repeat, kind, confident, year, want, meet, talk, thing, nation, act, art, write, computer, program, play, work, help, paint, reason, parent, report	3 hours
2	- To describe sports and safety	sailing, skiing, climb, surf, cycling, frightening, dangerous, excite, tedious, equipment, trainer, win, favourite, lifejacket, glove, twist, goggle, hurt, medicine, safe	sail, climb, fright, danger, excite, equipment, train, favourite, twist, hurt, safe	2 hours
3	- To talk about the weather - To talk about past activities	cool, warm, freeze, snowy, foggy, temperature, windy, aquarium, photo, fantastic, interest, cloud, heavy, clean, visit, dive, swimming, play, seahorse, listen, talk, want, watch, ostrich	cool, warm, freeze, snow, cold, wind, photo, fantastic, interest, cloud, heavy, clean, visit, swim, listen, talk, want, watch	3 hours
4	- To talk about holidays and travel	passport, ticket, suitcase, diary, Eiffel Tower, travel, beach, mountains, train, plane, camping, farming, crowd, cousin, shop, museum, delicious, go, happy, laugh, surf	ticket, tower, travel, beach, mountain, plane, camp, crowd, cousin, shop, museum, happy, laugh	2 hours
5	- To talk about places and give directions	amusement, park, shop, station, roller, coaster, ask, art gallery, police station, corner, office, instruction, bumper, attraction, sandwich, drink, enjoy, location, population, collection, beautiful	park, centre, station, ask, corner, office, instruction, attract, drink, enjoy, location, population, collection, beautiful	3 hours
6	- To talk about entertainment	documentary, film, news, character, song, interview, game show, astronaut, move, release, join, call, start, clothe, business, jungle, general, success, romantic, comedy, detective, horror, actress, culture	film, character, song, interview, show, move, release, join, call, start, clothe, business, general, success, romantic, comedy, culture	3 hours
Total		154	100	16 hrs

Table 18 shows some examples of the word part instruction applied in the classroom for the experimental group.

Table 18: An example of word part instruction and activities

Aim	Strategy	Example	Activity
To identify the meaning of prefixes	Identify prefixes by using PowerPoint	*re̱use, re̱cycle, re̱write*	- Analyzing - Fill-in-the-blank - Choosing the correct words
To determine the meaning of suffixes	Identify suffixes by using a flashcard	*teach<u>er</u>, writ<u>er</u>, doct<u>or</u>, happi<u>ly</u>, kind<u>ly</u>*	- Analyzing - Fill-in-the-blank - Choosing the correct words
To identify the part of speech	Identify - Noun - Verb - Adverb - Adjective	*teacher* (noun), *rewrite* (verb), *happily* (adverb)	- Matching and combining - Asking and answer - Reading

To summarize, when selecting an appropriate vocabulary for students, the teacher needs to consider the vocabulary size and students' abilities. The vocabulary should not be too easy nor too difficult for the students, and the number of words should be suitable for teaching. A summary of the process used to select the prompt words is shown in Figure 1.
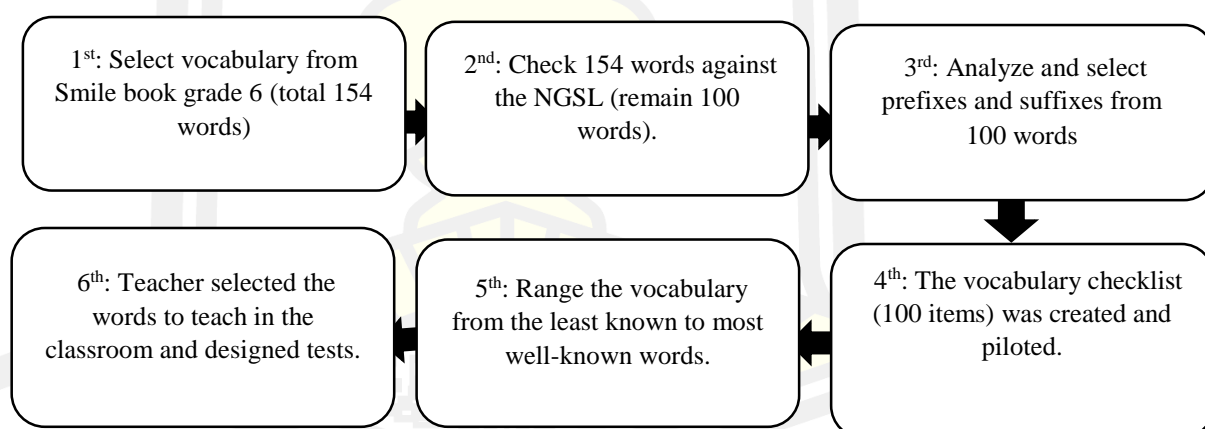
Figure 1: A summary of the process used to select the prompt words

3.5 The lesson plan

This current study included 16 lesson plans, with one hour allocated to each plan. Each lesson plan consisted of a topic, objective, time, level, activity, materials, teaching procedure, and evaluation. The word part instruction is described in detail in Table 19. Briefly, the instruction focused on analyzing and building words, and students were taught how to analyze prefixes and suffixes. The lesson of prefixes

includes *re-, un-,* while the lesson of suffixes includes *-er, -or, -s, -es, -ion, -ive, -ing, -ed, -ic, -ful, -ly.* Students are also taught about the part of speech. Engaging activities were included to motivate students. Table 19 shows one of the lesson plans applied in the classroom.

Table 19: One example of a lesson plan

		Lesson Plan 1
1.	**TOPIC**	**A PREFIX** *(RE-)*
2.	**OBJECTIVE**	Students will be able to identify prefixes from the words
3.	**TIME**	55 minutes
4.	**LEVEL**	Grade 6
5.	**ACTIVITY**	• Asking/answering • Analyzing • Matching • Game: Analyzing words
6.	**MATERIALS**	1. Worksheet 2. Word cards
7.	**TEACHING PROCEDURES**	
WARM-UP **(5 MINS)**		1. The teacher greets students and divides them into groups by counting one, two, three, and four. The students are then asked to select a group name related to 'animal'. 2. The teacher displays four words on the blackboard and asks students to see the common word (*rewrite, reuse, recycle, repeat*). 3. The teacher asks a classroom representative to write the common word on the board *(re-)*.
PRESENTATION (10 MINS)		4. The teacher explains the objective to the students. 5. The teacher introduces the prefix *'re-'* and its meaning and then provides more examples. 6. All students are asked to pronounce each word together, then each group is asked, then each individual.
PRACTICE **(10 MINS)**		7. The teacher assigns students to complete the worksheets individually. The worksheet requires students to match the words with the given definitions in 5 minutes. 8. The teacher tells students to switch their worksheets with their friends to check if it is correct. Then, the teacher asks a student randomly to say the answer (1 item = 1 point, totaling 10 points).
PRODUCTION **(25 MINS)**		9. The teacher gives every group a piece of paper and asks them to find as many words as they can that begin with *'re'* in the Smile Book Grade 6 in 3 minutes. 10. The teacher circulates and monitors what they are doing. 11. When the time is up, the teacher asks a representative of each group to write the vocabulary on the board. Then teacher checks whether or not the response is correct. The winner is the group that identified the most words beginning with *'re-'*. 12. Let students pronounce each word together and spell the words. 13. Have students play the 'Analyzing word game' in the group. Firstly, the teacher shows a word card, e.g., *remake.* Students need to help each other analyze the word *'remake'* in the group. Then, each group writes the answer on the paper. Before they show the paper, they have to say the name of their group first and then the teacher points to their group; then, they can show the answer.
WRAP UP **(5 MINS)**		14. The teacher reviews all vocabulary they learn and emphasizes the prefix *'re'*. 15. Give students compliments to encourage them to learn English.

8. EVALUATION		From worksheet: Matching words with the definitions. Scoring is as follows:
		    9-10 points = Great
		    7-8 points = Very good
		    6-7 points = Good
		    Less than 5 points = Try harder!

The lesson plan progresses from easy to more complex instruction. The 16 hours of lesson plans include teaching prefixes, suffixes, and parts of speech. The teaching procedure consists of five stages: warm-up, presentation, practice, production, and wrap-up. Students are assigned to complete activities such as filling word part tables, cutting up complex words, building complex words, choosing a correct form, and finding etymologies in the practice stage. Activities during the production stage included word taking – word-making games and analysis of word activity. Some of the word part instructions and activities are described in Table 18. It is important to note that for teaching and learning procedures to be effective, teachers need to plan what to teach in the classroom, what strategy will be used, the appropriate vocabulary, as well as fun activities. These will make teaching and learning procedures well organized and will help to keep students engaged in the classroom.

3.6 Data collection procedure

The period of data collection was approximately two months and occurred during class. The three vocabulary knowledge tests were conducted on different days. Given that form knowledge can be transferred to other aspects (Webb, 2005; Laufer & Goldstein, 2004) and that 'use'' knowledge is the last aspect that learners acquire (González Fernández & Schmitt, 2019; Nontasee & Sukying, 2021), the Word Segmentation Test was given first, followed by the L1 Translation Test and, finally, the test of Word Part Use. After the pre-testing, students received their instruction, which differed for the experimental and control groups. The word part strategy instruction lasted for 16 hours, over eight weeks. All participants received an average of 4 hours of English instruction per week, including 2 hours of word part strategy instruction (experimental group) or general instruction (control group) per week. The day after the final instruction lesson, all students were given the three tests again. Then, students from the experimental group were requested to complete a questionnaire. Before the tests were administered, the instructions and a few illustrations of the tasks were provided to participants in their native Thai language. Participants were not allowed to use dictionaries.

3.7 Establishing the reliability and validity of the tests

The content validity and reliability of the tests and questionnaire were assessed by three experts in English education who had taught English in Thai EFL contexts for more than five years, including two University teachers and one primary school teacher. The rating scale of the experts' opinion is described as follows:

+1 = The item is appropriate

0 = Not sure

-1 = The item is not appropriate

The IOC (Index of Item-Objective Congruence) was then used to measure the consistency of each item.

$$IOC = \frac{\sum R}{N}$$

IOC means the index of congruence

R means the total score from the experts' opinions

N means the number of experts

The three experts evaluated the tests and questionnaires. The items with an IOC value higher than 0.5 were retained, and those scoring lower than 0.5 were excluded. After the evaluation of all experts, the tests and questionnaires were revised based on the experts' comments.

The research instruments were piloted before the main study and all participants were from different cohorts. The internal consistency reliability of the tests and questionnaires were analysed. A Cronbach's (1951) alpha coefficients were obtained using SPSS for the responses to the instruments. Nunnally's (1978) widely-accepted social science cutoff Cronbach's $\alpha > 0.70$ is used to assess the reliability of the scales. Nunnally and Bernstein (1994) recommended that items with a correlation of $r \leq .30$ to their scale need to be retained. Cronbach's Alpha if Deleted values are then analyzed to determine other potential problems by examining if any of the values exceeded the alpha reliability estimate for its factor. If the Cronbach's Alpha Deleted exceeds its factor, it signals that the reliability would increase if the item is removed.

If deleted, any items flagged by the Cronbach's Alpha were examined, and if it made sense substantively, the item was extracted. The experts were also asked to evaluate all the tests and questionnaire items regarding the test validity. All construct validity, face validity, and content validity were carefully checked.

3.8 Data analysis

To analyze the scores on the Word Segmentation test, L1 Translation Test, and test of Word Part Use, SPSS software was used to conduct paired samples t-tests and independent-samples t-tests. The t-tests assessed the students' learning vocabulary ability before and after word part instruction or regular class instruction. Specifically, two means of the same group of participants were compared before and after a treatment condition using a paired-samples t-test (Field, 2009).

In addition, the scores from the questionnaire items rated on the 5-point Likert scale were analyzed using descriptive statistics (SPSS software). This provided the average, median, and standard deviation of a given item's ratings to assess students' attitudes towards word part instruction and its impact on their vocabulary knowledge acquisition. The interpretation of the mean score was adapted from Landell (1997). Table 20 shows the interpretation of mean scores.

Table 20: The interpretation of mean scores

Scale	Meaning	Attitudinal Level	Mean range
5	Strongly agree	Very high	4.50-5.00
4	Agree	High	3.50-4.49
3	Neutral	Average	2.50-3.49
2	Disagree	Low	1.50-2.49
1	Strongly disagree	Very low	1.00-1.49

3.9 Summary

This chapter describes the methodology of the current study. First, the process of preparing and designing the instruments, including the selection of the target words, is outlined. Then, the research procedure is explained, including the pilot study that was conducted to determine the reliability and validity of the design and the research

instruments. In the main study, all participants completed three vocabulary tests before undergoing 16 hours of either word part instruction (experimental group) or general instruction (control group). Following this instruction, both groups completed the three tests once again. In addition, the experimental group completed a questionnaire assessing their attitudes towards word part instruction in the classroom. This study is a quasi-experimental research design using a quantitative method study. A summary of the research design is shown in Figure 2.
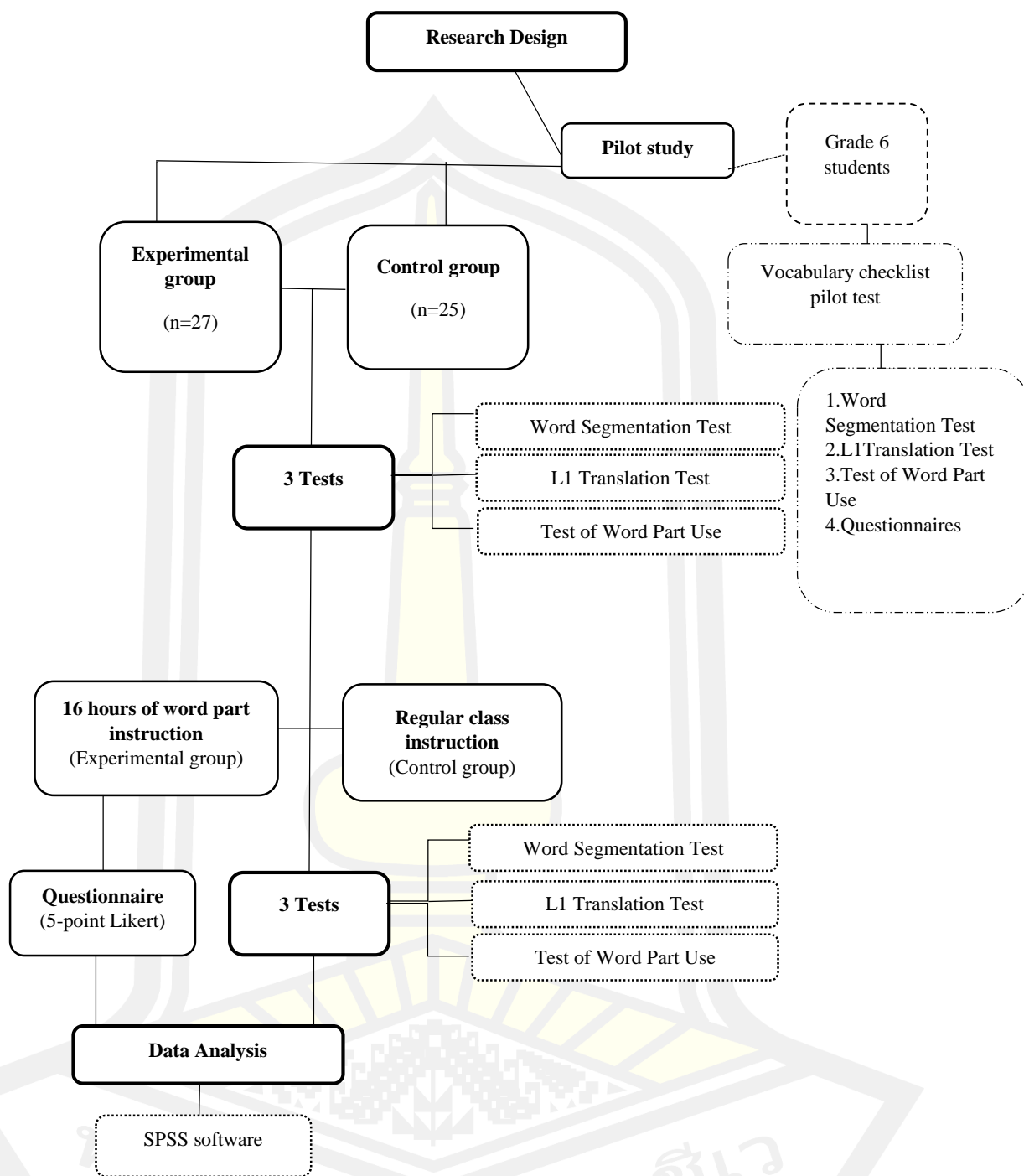
Figure 2: Visual diagram of the research design for the current study

CHAPTER IV
RESULTS

This chapter reports the study results, which include two sections based on the two research questions. The first section presents the findings of word parts strategy instruction on Thai primary school students' vocabulary knowledge. The second section reports Thai primary school students' attitudes toward the word part strategy instruction on their vocabulary knowledge. This section ends up with the summary of the results.

4.1 Vocabulary knowledge tests results

To answer the Research question one, the current study investigated the effects of word part strategy instruction on Thai primary school students' vocabulary knowledge. The quantitative data were collected from the tests, including the Word Segmentation Test (WST), the L1 translation test (L1TT), and the Test of Word part use (TWP) that were administered before and after the experiment. Independent samples *t*-test has been used to measure the scores against each other, while a dependent-samples *t*-test revealed the difference between pre and post-test performance for the same group.

4.1.1 Word segmentation test results

This section reports the overall performance on the segmentation test of Thai primary school students in experimental and control groups. It interprets their performance using Statistical Package for the Social Sciences (SPSS) software tools. The descriptive and inferential statistics include the mean, standard deviation, percentage, and comparison *t*-test. The raw scores were converted into percentages. Percentages are used to compare different vocabulary knowledge test scores, which differ across different tests.

Table 21 shows the summary of word-part knowledge measured by the Word Segmentation Test among primary school students. The quantitative analysis of the findings showed that the experimental group students performed higher than the control group counterparts. Specifically, the experimental group students achieved an

average performance of 49.87% (SD = 2.90) for the pretest and 72.70% (SD = 2.10) for the posttest. However, control group participants scored an average of 49.02% (SD = 2.16) on the pretest of the WST and scored an average of 55.81% (SD = 2.52) on the posttest. The analysis of the findings also indicated the statistically significant difference between the pretest and posttest performance in both experimental and control groups. These findings suggest that Thai primary school students improved their knowledge of word parts over time.

Table 21: A summary of students' performance on word-parts knowledge measured by the Word segmentation test

Group	Pretest			Posttest			t-value	p-value
	$\bar{x}$	%	S.D.	$\bar{x}$	%	S.D.		
Experimental (N=27)	21.44	49.87	2.90	31.26	72.70	2.10	17.77	0.00*
Control (N=25)	21.08	49.02	2.16	24.00	55.81	2.52	6.70	0.00*
t-value		0.51			11.31			
p-value		0.61			0.00*			

*Significant at the 0.05 level (p<0.05)
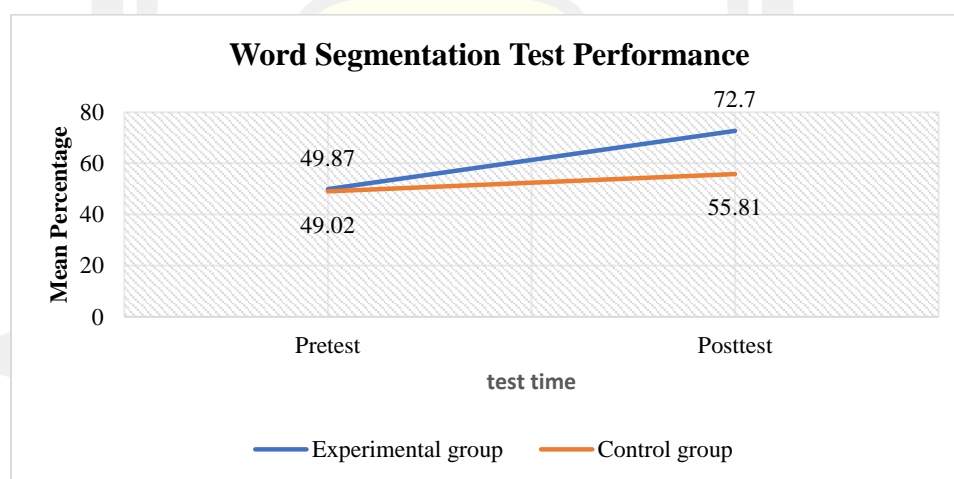
Figure 3: Students' performance on word-parts knowledge measured by Word segmentation test

An independent-samples t-test was also conducted to compare word-part knowledge tests between the groups (See Figure 3). The results revealed no significant differences in the pre-test performance ($t = 0.51$, $p = 0.61$). In contrast, there was a significant difference in the posttest performance between the experimental and control participants ($t = 11.31$, $p = 0.00$). This result indicates the positive effect of

word part strategies on the development of vocabulary knowledge among Thai primary school students.

4.1.2 The L1 translation test results

Table 22 shows the summary of word-part knowledge measured by the L1 Translation Test among primary school students. The quantitative analysis of the findings showed that the experimental group students performed higher than the control group counterparts. Specifically, the experimental group students achieved an average performance of 39.44% (SD = 1.22) for the pretest and 62.04% (SD = 1.39) for the posttest. However, control group participants scored an average of 40.00% (SD = 1.68) on the pretest of the L1TT and scored an average of 40.40% (SD = 1.50) on the posttest. The analysis of the findings also indicated the statistically significant difference between the pretest and posttest performance in both experimental and control groups. These data imply that Thai primary school students' understanding of word parts improved with time.

Table 22: A summary of students' overall performance on word-parts knowledge measured by the L1 translation test

Group	Pretest			Posttest			*t*-value	*p*-value
	$\bar{x}$	%	S.D.	$\bar{x}$	%	S.D.		
Experimental (N=27)	7.89	39.44	1.22	12.41	62.04	1.39	16.80	0.00*
Control (N=25)	8.00	40.00	1.68	8.08	40.40	1.50	0.26	0.795
t-value		0.27			10.79			
p-value		0.78			0.00*			

*Significant at the 0.05 level (p<0.05)
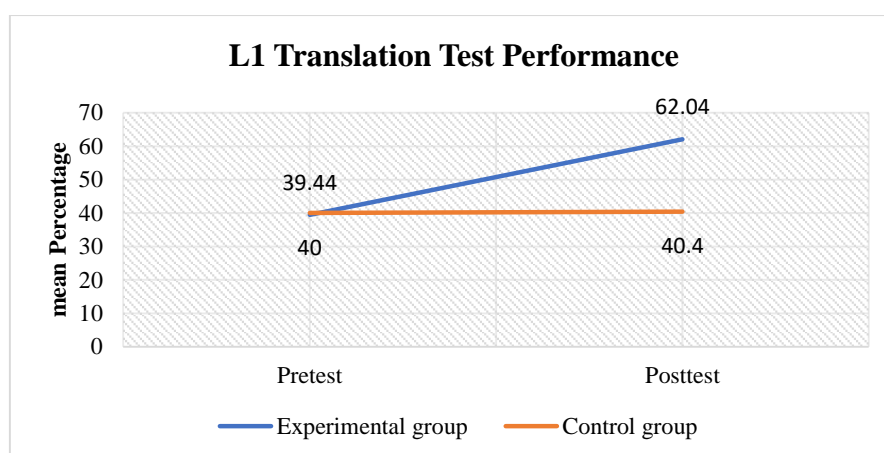
Figure 4: Students' performance on word-parts knowledge measured by the L1 translation test

Figure 4 demonstrates Thai primary school students' performance on word-parts knowledge measured by the L1 translation test using an independent-samples *t*-test to compare the L1 Translation test between the groups. The results revealed that there were no significant differences in the pre-test performance ($t = 0.27$, $p = 0.78$). In contrast, there was a significant difference in the posttest performance between the experimental and control participants ($t = 10.79$, $p = 0.00$). This result indicates the positive effect of word part strategies on the development of vocabulary knowledge among Thai primary school students.

4.1.3 Test of word part use results

Table 23 shows the summary of word-part knowledge measured by the Test of word part use among primary school students. The quantitative analysis of the findings showed that the experimental group students performed higher than the control group counterparts. Specifically, the experimental group students achieved an average performance of 25.74% (S.D. = 1.71) and 50.19% (SD = 2.63). However, control group participants scored an average of 25.60% (SD = 1.81) on the pretest of the TWP and scored an average of 29.40% (SD = 1.94) on the posttest. The analysis of the findings also indicated the statistically significant difference between the pretest and posttest performance in both experimental and control groups. These findings suggest that Thai primary school students have increased their knowledge of word parts over time. To see the effect of the students' performance on word part knowledge in aspect use, the results are shown in Table 23 and Figure 5.

Table 23: A summary of students' performance on word-parts knowledge measured by the test of word part use

Group	Pretest			Posttest			*t*-value	*p*-value
	$\overline{x}$	%	S.D.	$\overline{x}$	%	S.D.		
Experimental (N=27)	10.30	25.74	1.71	20.07	50.19	2.63	16.42	0.00*
Control (N=25)	10.24	25.60	1.81	11.76	29.40	1.94	4.65	0.00*
t-value		0.11			12.88			
p-value		0.90			0.00*			

*Significant at the 0.05 level (p<0.05)
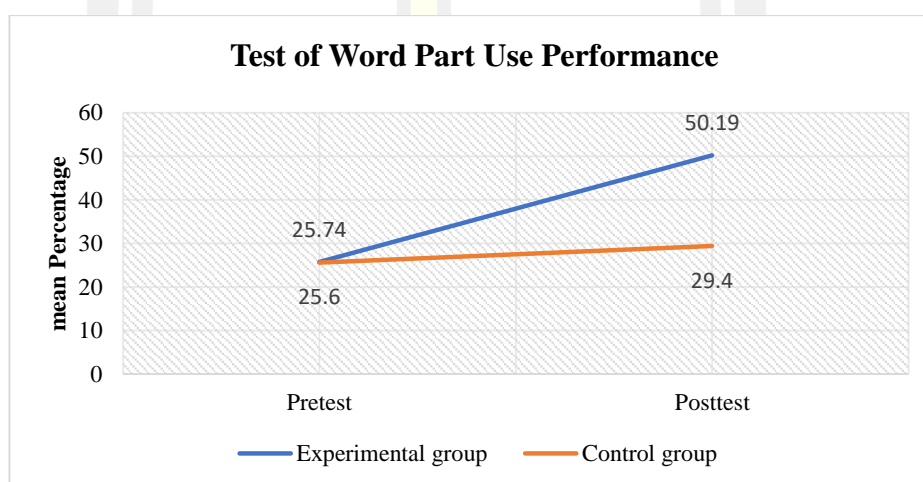
Figure 5: Students' overall performance on word-parts knowledge measured by Test of word part use

An independent-samples *t*-test was also conducted to compare the Test of word part use between the groups. The results revealed that there were no significant differences in the pre-test performance ($t = 0.11$, $p = 0.90$). In contrast, there was a significant difference in the posttest performance between the experimental and control participants ($t = 12.88$, $p = 0.00$). This result indicates the positive effect of word part strategies on the development of vocabulary knowledge among Thai primary school students. Regarding the overall performance on measures of vocabulary knowledge aspects among Thai primary school students, the quantitative data analysis derived from different vocabulary knowledge measures revealed that the experimental group participants outperformed their control group counterparts in all vocabulary knowledge tests. Specifically, Thai primary school students performed the best on the word segmentation test in both groups, followed by the L1 translation test and the test of word part use. These findings indicate that Thai primary school students tend to

acquire different aspects of vocabulary knowledge at different times. The results conform to Sukying's (2018) study that students first gain receptive knowledge of form and meaning and then productive affix knowledge (Sukying, 2018). Other related details of the findings are illustrated in Table 24 and Figure 6.

Table 24: The summary results of pre-and post-test score overall performance

Group		WST		L1TT		TWP	
		Pre	Post	Pre	Post	Pre	Post
Experimental (n=27)	Mean	21.44	31.26	7.89	12.41	10.30	20.07
	%	49.87	72.70	39.44	62.04	25.74	50.19
	S.D.	2.90	2.10	1.22	1.68	1.71	2.63
Control (n=25)	Mean	21.08	24.00	8.00	8.08	10.24	11.76
	%	49.02	55.81	40.00	40.40	25.60	29.40
	S.D.	2.16	2.52	1.68	1.50	1.81	1.94
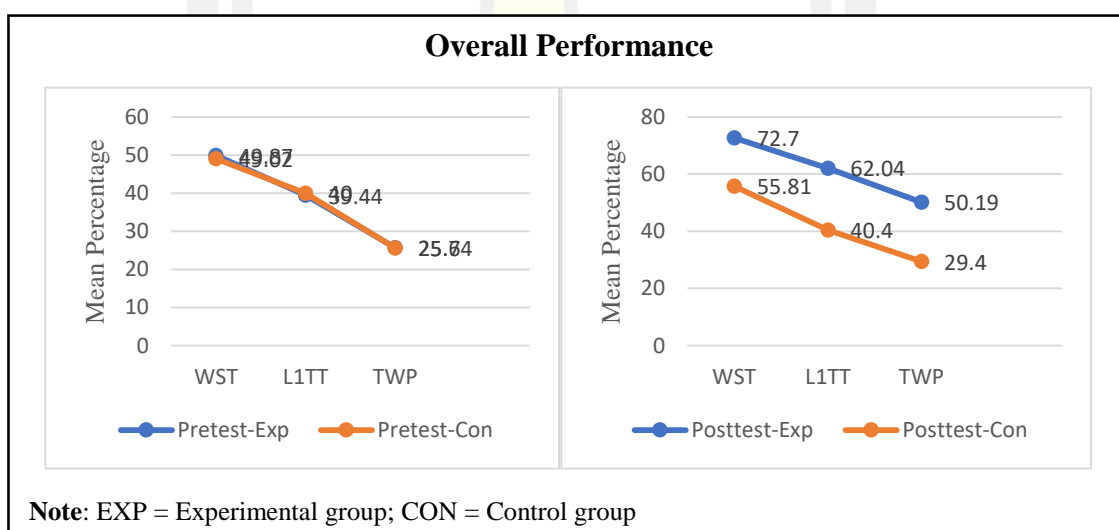
Figure 6: The summary results of pre-and posttest score percentage overall performance

To recapitulate, this study indicates the positive effects of word-parts strategies on enhancing vocabulary knowledge among Thai primary school students. The findings also showed the developmental continuum of vocabulary learning. Expressed another way, the current findings showed that Thai primary school participants acquired different vocabulary knowledge aspects at different times. More precisely, the results showed that Thai primary school participants tended to acquire word forms before being able to obtain word meaning.

4.2 The results of students' attitudes toward word part strategy instruction

To answer the Research question two, this section investigated Thai primary school learners' attitudes toward word part strategy instruction by analyzing the data from the attitude questionnaires administered at the end of this study for the experimental group. Students were asked to rate a 15-item questionnaire to measure their five attitudinal variables from 'strongly disagree' (1 point), 'disagree' (2 points), 'neutral' (3 points), 'agree' (4 points), and 'strongly agree' (5 points).

The following table described the results of the closed-ended statement items in the questionnaires related to the students' attitudes towards word part strategy instruction.

Table 25: Students' attitudes toward word part strategy instruction

No.	Statement	Min	Max	Mean	%	S.D.	Meaning
1	Learning by word part strategy allows me to learn new vocabulary.	2	5	3.93	78.52	0.87	High
2	I think word part strategy instruction facilitate me in becoming familiar with new words.	3	5	4.04	80.74	0.81	High
3	I think using word part strategy instruction is a good way in learning vocabulary.	3	5	3.67	73.33	0.62	High
4	I feel motivated when I learn vocabulary by word parts strategy.	2	5	3.85	77.04	0.99	High
5	I feel much better when I learn vocabulary by word parts strategy to learn vocabulary.	3	5	4.00	80.00	0.83	High
6	I think the fun activity enable me in recognizing the words.	3	5	4.15	82.96	0.86	High
7	I think word part strategy instruction assist me in specifying the part of speech.	2	5	4.11	82.22	0.89	High
8	Learning by word part strategy enhanced my vocabulary knowledge.	3	5	4.33	86.67	0.62	High
9	I feel that learning vocabulary by word parts strategy would help me recognize words faster easily.	2	5	4.26	85.19	0.81	High
10	I enjoy learning vocabulary by word parts strategy.	2	5	4.19	83.70	0.74	High
11	Learning by word part strategy helped me to improve my vocabulary knowledge.	3	5	4.63	92.59	0.56	Very high
12	Word part strategy instruction is appropriate for learning vocabulary at my level.	2	5	4.22	84.44	0.85	High
13	I feel comfortable when I learn by word part strategy.	3	5	4.19	83.70	0.79	High
14	Word part activities help me build confidence and reduce stress in the classroom.	3	5	4.07	81.48	0.73	High
15	Learning by word part strategy encourages me to learn more vocabulary.	2	5	3.89	77.78	0.93	High
	Total			**4.10**		**0.79**	**High**

As shown in Table 25, 14 statements had a high mean score between 3.67 – 4.33 and a very high mean score that was 4.63. Therefore, we may conclude that entrepreneurial the overall mean of the attitude questionnaire was 4.10, and S.D. = 0.79. All 15 statements have a score of 5 (strongly agree), which shows that the

participants strongly believe in the influence of the word part strategy instruction in their lectures. The highest mean score is 4.63, obtained by statement 11 (*Learning by word part strategy help me to improve my vocabulary knowledge.*). It shows that students agree that the word part strategy instruction helps them improve their vocabulary knowledge during the lecture. This highest score is followed by the score of statement 8 (*Learning by word part strategy enhance my vocabulary knowledge.*) 4.33 and statement 9 (*I feel that learning vocabulary by word parts strategy would help me recognize words faster easily.*) 4.26. These two results suggest that word part strategy instruction play an important role in making students more interested in the lectures.

However, the lowest mean score is 3.67 obtained by statement 3 (*I think using word part strategy instruction is a good way in learning vocabulary.*), followed by statement 4 (*I feel motivated when I learn vocabulary by word parts strategy*), 3.85, and statement 15 *(Learning by word part strategy encourages me to learn more vocabulary.)* 3.89. A few students cannot learn better with the word part strategy instruction in their lecture as they cannot be better at concentrating.

4.3 Summary

According to the Research Question I, the findings indicated that eight weeks of word part strategy instruction improved the students' vocabulary knowledge. The students' vocabulary knowledge increased significantly after learnt by using word part strategy. In addition, according to the Research Question II, most participants were satisfied with the word part strategy instruction and had more positive attitudes toward vocabulary because it had helped them learn new vocabulary and enhance their vocabulary knowledge.

CHAPTER V
CONCLUSION AND DISCUSSION

The current study examined the effects of word part strategy instruction in Thai primary school students and students' attitudes toward word part strategy instruction in response to two specific research questions. In this chapter, the results are analyzed and discussed, and the summary, implications for practice, limitations, and recommendations for future studies are also presented.

5.1 The effects of word part strategy instruction in a Thai primary school context

The quantitative data were obtained from the three vocabulary knowledge tests administered before and after the experiment to respond to the first research question. The overall results indicate that the primary school students' vocabulary knowledge increased after using word part strategy instruction. Indeed, students in the experimental group performed better on the posttests than students in the control group. Thai EFL participants from both groups performed the best on the WST, followed by the L1TT and the weakest on the TWP. This phenomenon could be explained by the degree of learning in context (Henrikson, 1999) and L2 contexts and the developmental continuum of learning (Nation, 2013). The results conform to Sukying's (2018) study that students first gain receptive knowledge of form and meaning and then productive affix knowledge (Sukying, 2018).

The WST used in the present study measures a learner's ability to break down a word into smaller parts. The results indicated that the posttest average means in both groups were higher than the pretest, especially in the experimental group. Thus, it suggests that students recognize the form of the target prefix and suffix. This is likely because word part knowledge helps students interpret unfamiliar words by analyzing words into smaller parts. For instance, the word '*restart = re + start*'. All students used the word part strategy when analyzing the questions in WST, and all of them could see the connections between the words and the word parts after the answers to the tests had been sent. For those students who performed well in the test, the word part strategy may have helped them break down words. The results are consistent with

Nation's (2001) claim that the students need to acquire the ability to divide the words into parts and know the meaning of affixes (Nation, p.278).

The second test administered was the L1 translation test (L1TT). The L1TT was designed to measure the learner's ability to relate the meaning of the word part to the meaning of the word. The results indicate that most students could recognize the meaning of a word and write English vocabulary after the instruction. Both control and experimental groups performed better on the post-test than the pretest. However, this improvement was greater in the experimental group. The significant improvement could be due to the principles of word formulations using word part strategies. To illustrate, students would break a more complex word into smaller parts and make use of the familiar lexical parts. More precisely, the students being trained in word part strategies would be able to break the unknown parts into parts in which learners require knowledge of recognizing prefixes and suffixes when they occur in words. For example, the word *unhappily* consists of three parts, i.e., *un-*, *happy*, and *-ly*. Before using this strategy, students must recognize the word parts. After breaking the word into parts, learners would then relate the meaning of the word parts to the meaning of the word. However, this stage requires the learner to be able to re-express the meaning of the new word by using word part (affix) knowledge and then connecting the meaning of the word parts with the dictionary meaning of the whole word to facilitate and mediate their understanding.

Another example is the word 'artist'. Before the instruction, no primary school participants could remember its meaning. One of them provided its meaning in their mother tongue, but it was incorrect. After the experiment, students encountered the word several times and became familiar with it; thus, twenty-one students could recognize the word '*artist*' and then write it in English. Therefore, word part knowledge helps students relate the meaning of word part to the meaning of the word. The current findings are consistent with previous studies that word part strategies are effective for vocabulary learning and development (Harriqi, 2019; Nation, 2013; Nirattisai, 2014; Sukying, 2018, 2020).

The paired *t*-test analysis also revealed a significantly substantial improvement pre- and after the treatment, indicating the positive effect of the word part strategy. This improvement could be because knowledge of word parts assisted students in extrapolating from a word class of new lexical components based on derivational affixes. Knowledge of word parts also mediates learners to create a new affixed form of the word. These findings reaffirm previous studies that knowledge of word part components facilitate students' vocabulary acquisition and development (Sukying, 2017, 2018a, 2018b; 2020; Nation, 2013).

The measure of word part use assessed a learner's ability to use word part knowledge in the context. It involves completing the correct form, meaning, word part use and specifying the part of speech. The results indicate that the posttest scores were greater in both groups, especially in the experimental group. Students' vocabulary knowledge improved because word part strategy can raise a students' vocabulary knowledge that involves the use of word parts. For instance, take the sentence '*My brother is a ……(work).*' Before the experiment, none of the students knew that adding a suffix *-er* after a verb can change the meaning and its part of speech, such as adding *-er* to the word '*work* (v.)' to create '*worker* (n.)'. All students reported that they did not know the meaning of *-er* even though some of them reported seeing this word before. By contrast, twenty students could identify its meaning and its part of speech after the word part strategy instruction. Therefore, in the sentence '*My brother is a ……(work).*' most students completed the word 'worker' and selected 'noun' as a part of speech. Thus, word part knowledge assists students in analyzing words, relating the meaning, and specifying the part of speech.

Overall, word part knowledge helps students interpret unfamiliar words by analyzing words into smaller morphemes and connecting words to known roots or known word part components. Students learn to break the unknown word into parts and relate the meaning of the word part to the meaning of the word. In addition, the knowledge of word part can be used to verify that an unfamiliar word has been guessed from context, and students also learn to specify the part of speech. These findings support previous results on the effect of affixes, which found that affixes improved learners' vocabulary knowledge (Carlisle & Katz, 2006; Nagy et al., 2014; Nation, 2008;

Schmitt & Meara, 1998; Sukying, 2018; Zimmerman, 2009 Liu Xinjie, 2011; Mounir Harraqi, 2019).

In conclusion, the results show that students significantly improved their vocabulary knowledge, especially in the experimental group in which the word part strategy was employed. Thus, word part strategy instruction is beneficial for EFL primary school learners. Indeed, the word part strategy instruction and the classroom activities led to vocabulary gains; that is, students became familiar with the target words, analyzed and combined words, and identified the part of speech which helped them to infer the meanings of the word and to use the word in context.

5.2 Students' attitudes towards the word part strategy instruction on their vocabulary knowledge

In response to addressing students' attitudes towards the use of word part strategy pedagogy, the data obtained from the five-point Likert Scale questionnaire were analyzed. The results showed that students had a high level of agreement, indicating that students were satisfied with the word part strategy. Students also became more motivated to learn new words through word part strategies. The positive motivation and attitudes could be that word part strategies may increase learners' awareness that many words can be broken down into smaller parts. This awareness could generate considerable information about the meaning of words formed rather than learning the individual items. These results align with previous literature that the application of word part strategy training mediates students learning vocabulary and growth (Nation, 2013; Sukying, 2018; 2020).

The participants have gained knowledge of word parts, including adding prefixes, adding suffixes, and specifying parts of speech. The word part knowledge facilitates learning morphologically complex words and reinforces English language skills. The word part strategy instruction enhances learners' word knowledge and reading, writing, and grammar skills. The questionnaire results also indicate that word part strategy instruction in English language classes is beneficial to vocabulary learning and teaching, at least in a Thai EFL primary school context, which is consistent with

previous studies on the importance of word families for systematic vocabulary teaching and learning strategies (Bauer & Nation, 1993).

In conclusion, the current results revealed that most students have positive attitudes toward word part strategy instruction. In addition, the results also show that most students enjoy learning by word part strategy instruction because it helps them recognize words faster and with greater ease.

5.3 Conclusion

The current study investigated the effects of word part strategies on primary school students' vocabulary learning and development. The analysis of the findings showed that all measures of word part knowledge had a positive effect on students' better understanding of the form-meaning link of the unfamiliar words. The results also indicated that word part strategies could facilitate L2 vocabulary learning and growing. Moreover, the current study proved that the better word part knowledge students may have, the more effective is the learners in mediating vocabulary acquisition. In this study, the students need more time to derive the meaning of word part components and to practice how to re-express the meaning of the new formulated words with the assistance of the word part strategy. In regard to attitudes towards the use of word part strategy instruction, the results suggested that students had a high level of a favourable attitude towards the use of word part strategies to enhance vocabulary learning and development. To sum up, the current study indicates the efficacy of word part strategies, providing evidence to support the existing literature that word part strategies are an effective teaching approach for vocabulary learning and growth.

5.4 Implications for pedagogical practices

The current study shows that word part strategy instruction has significant beneficial instructional effects in the Thai EFL primary school context. Teaching word parts as a mnemonic device to English language learners is a valuable tool for assisting them in overcoming the challenge of remembering a large number of words in English.

However, most EFL learners face great difficulty in memorizing, retaining, and recalling the vast number of English word parts due to the lack of familiarity with the

basic morphological units' languages. Having no background knowledge of roots and affixes to form the words, the learners are at a disadvantage in vocabulary acquisition. Thus, the curriculum should place greater emphasis on vocabulary teaching through word parts, starting at the primary level. Furthermore, English words that form the majority of the frequency words should be taught on a broader scale to help students reach the comprehension level that is necessary for reading and writing. This is especially important in a foreign language context as it will allow the students to continuously use word parts as a life-long tool for vocabulary acquisition. Finally, the lesson plan in this study can be a hands-on guideline for practitioners and researchers who would be of interest in word part strategies to enlarge their learners' vocabulary knowledge.

5.4 Limitations

It is acknowledged that the current may have its limitations. First, in the current study, the application of convenience sampling to select the classes for this study involves a significant hurdle in terms of generalizability. Second, during the Covid-19 pandemic, the results given are further limited by the short duration of teaching used in this study. Finally, because the classrooms in this sample were selected from a group of participants rather than being chosen at random, the extent to which this study's participants represent the entire population of students cannot be known.

5.5 Recommendations for future studies

The primary purpose of this experiment was to examine the impact of word part strategy instruction in a small primary school context. The researcher uses convenient sampling. Future research may randomly select the participants on a larger scale and expand the study's scope by increasing the number of morphological units taught, extending the instruction time, or lengthening the overall duration of the experiment to determine the effects of instruction over a more extended period. Besides, the interview is recommended to follow-up to certain respondents to questionnaires.

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APPENDIXES
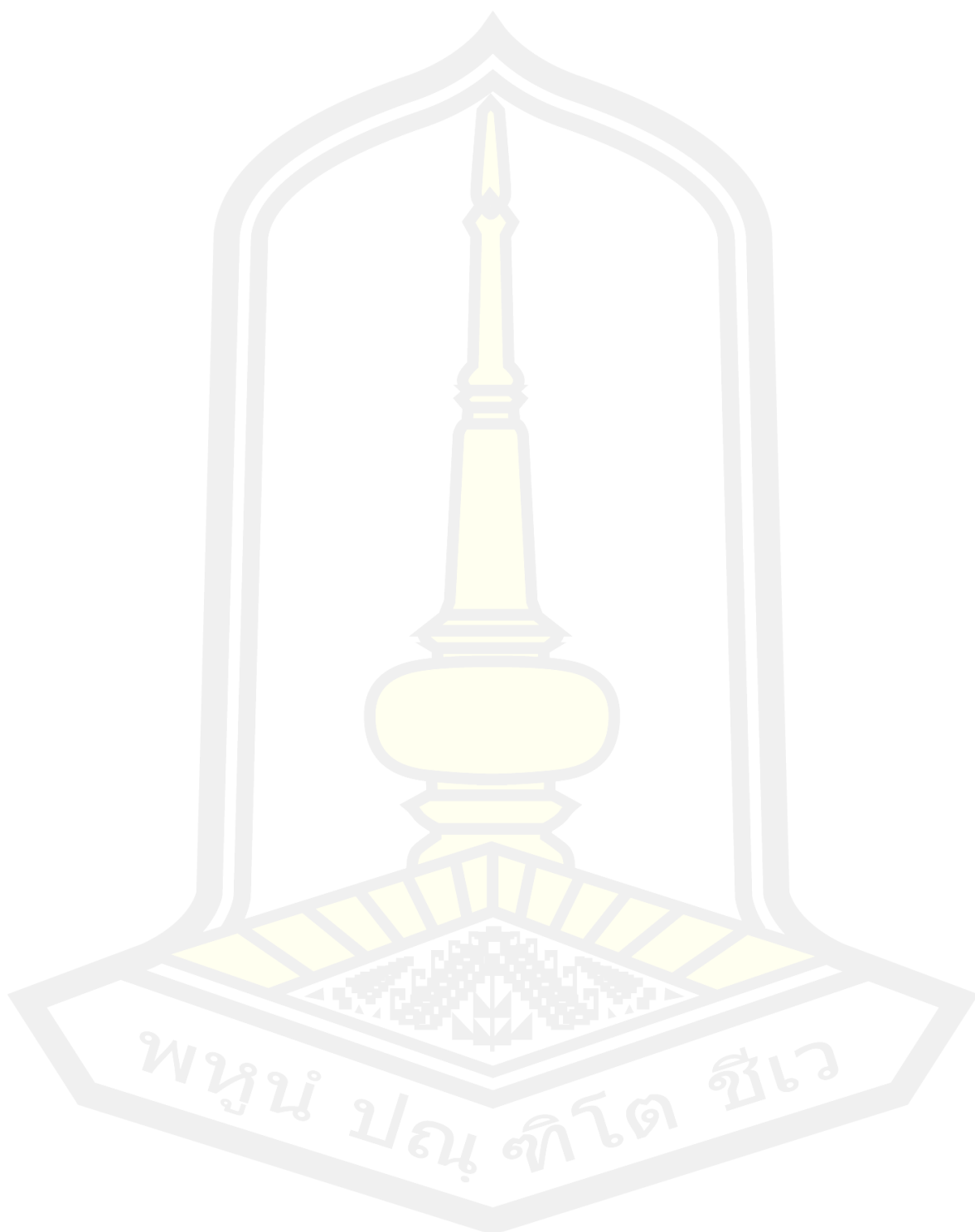
Appendix I-A: Test 1: The Word Segmentation Test

Instructions: Break down a word into the smallest parts.
(**คำชี้แจง** ให้นักเรียนแยกส่วนประกอบของคำที่กำหนดให้)

> <u>ตัวอย่าง</u> teacher = *teach* + *er*
> rerun = *re + run*

1. artist = …………………………………………………………………………………..……
2. caller = ………………………………………………………………………………………
3. Interviewer = ………………………………………………………………………………..
4. traveler = ……………………………………………………………………………………
5. heavily = …………………………………………………………………………………….
6. beaches = ……………………………………………………………………………………..
7. repeating = …………………………………………………………………………………..
8. appearance = ………………………………………………………………………………...
9. successful = ………………………………………………………………………………….
10. rejoined = …………………………………………………………………..…………………
11. wanted = …………………………………………………………………………………….
12. collection = ………………………………………………………………………………...
13. visitor = ……………………………………………………………………………………..
14. wonderful = …………………………………………………………………………………
15. twisted = ……………………………………………………………………………………..
16. unsafely = ……………………………………………………………………………………
17. excitement = ………………………………………………………………………………..
18. trainer = ……………………………………………………………………………………
19. national = …………………………………………………………………………………..
20. unattractive = ………………………………………………………………………………
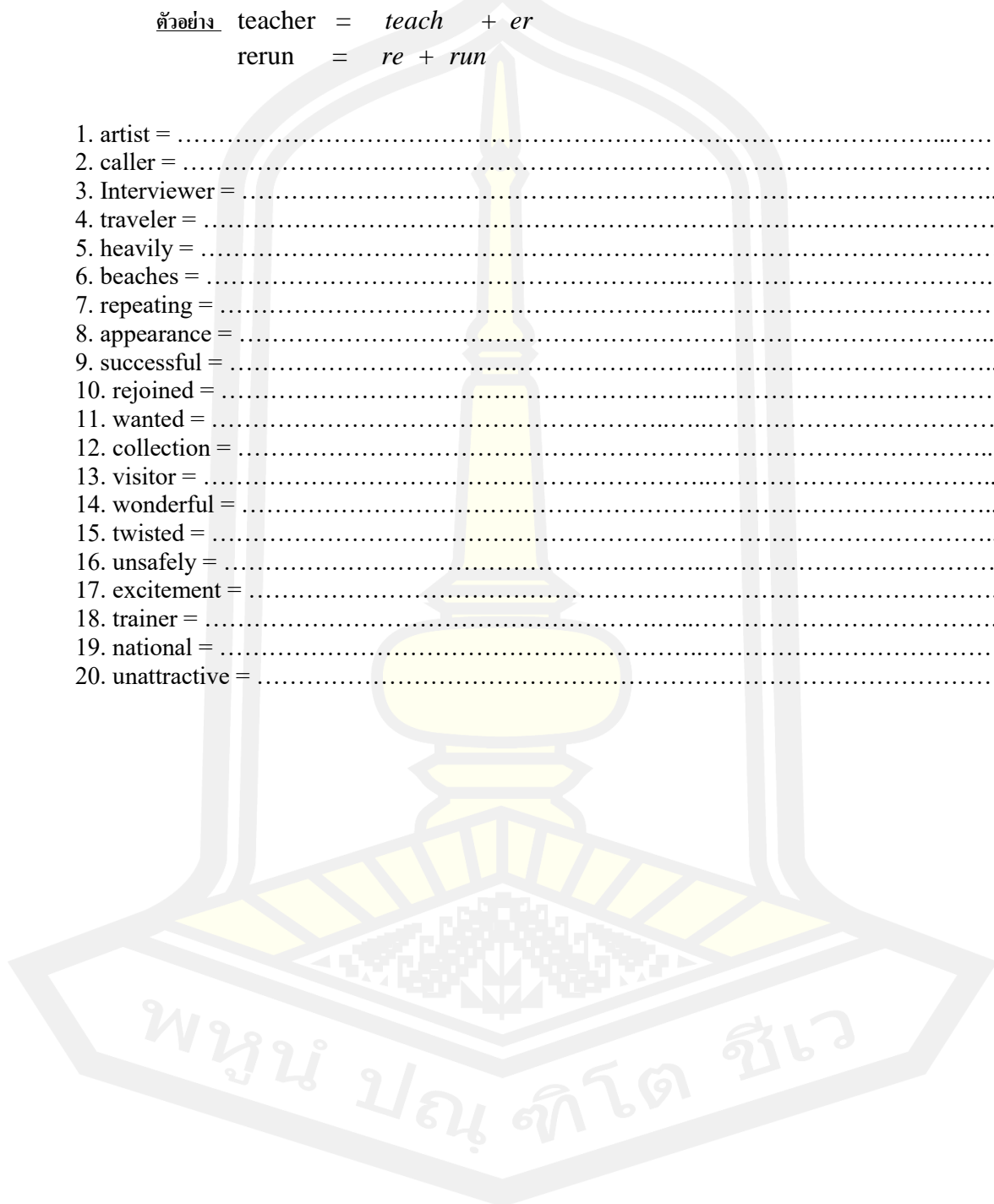
Appendix I-B: Test 2: The L1 Translation Test

Instructions: Read the Thai meaning and complete the English words with the given letter.

คำชี้แจง จงเขียนคำศัพท์ภาษาอังกฤษที่มีความหมายตรงกับคำศัพท์ในภาษาไทยโดย ตามอักษรที่กำหนดให้

    E.g.   คนรัก = **L*over***

1. อย่างระมัดระวัง	= C..
2. เริ่มต้นใหม่	= R..
3. นักเดินทาง	= T..
4. น่าสนใจ	= I..
5. ผู้ฝึก, ครูฝึก	= T..
6. อย่างมีความสุข	= H..
7. มหัศจรรย์	= W..
8. เต็มไปด้วยก้อนเมฆ	= C ....
9. ความเมตตา, ความมีน้ำใจ	= K..
10. ซึ่งเต็มไปด้วยฝูงชน	= C..
11. ศิลปิน	= A..
12. ประสบความสำเร็จ	= S..
13. คนงาน, ลูกจ้าง	= W..
14. ปกคลุมไปด้วยหิมะ	= S..
15. อย่างหนัก	= H ....
16. ไม่สะอาด	= U..
17. เหมาะสม, มีเหตุผล	= R..
18. ผู้เยี่ยมเยือน, แขก	= V..
19. อันตราย	= D..
20. ผู้สื่อข่าว	= R..

Appendix I-C: Test 3: Test of Word Part Use

Instruction: Write a correct form of a word that provided in the blanket for each blank in the sentence. Please specify the part of speech as well.

(นำคำศัพท์ที่กำหนดให้ในวงเล็บมาเติมลงในช่องว่างให้ถูกต้อง พร้อมทั้งระบุชนิดของคำ)

No.	Sentence	Part of speech			
		Noun	**verb**	**adver b**	**adjectiv e**
E.g.	*She is <u>calling</u> her friends. (call)*				/
E.g.	*This is a <u>ruler</u>. (rule)*	/			
1.	An …….…..………………. (*interview*) is in the office.				
2.	The ……….…………....... (*instruct*) is teaching in class.				
3.	Minny is ……….……..…. (*visit*) her parents next week.				
4.	Malee and Tom are ………….…..……… *(swim).*				
5.	Jenny loves ……………..……… (*shop*).				
6.	I am ………………………..……. (*excite*).				
7.	My brother is a ……….……….…….. (*work*).				
8.	Jim comes back home ……….…………….. (*safe*).				
9.	It is raining …………….…………….. (*heavy*).				
10.	I want to be an …………….…….…(*art*).				
11.	She is ……….…………….. T.V. (*watch*)				
12.	You have to be ……….……………..… (*care*).				
13.	I like her ……….……….…… (*kind*).				
14.	It is ……….……………. (*snow*) now.				
15.	It is ……….…………………….(*cloud*).				
16.	My life is …………..……….…….. (*wonder*).				
17.	He is …………………..……… (c*ollect*) stamps.				
18.	There are a lot of …………..………. (*travel*) in Phuket.				
19.	The ……….……..……… (*report*) speaks fluently.				
20.	They eat pizza …………….……………… (*happy*).				

Name …………………………………….…………… Number ……….……………

Appendix II-A: Questionnaire (English Version)

Students' Attitudes toward Word part Strategy Instruction

………………………………………………………………………………….

<u>**Direction:**</u>

1. The purpose of this questionnaire is to explore students' attitudes towards learning by Word Part strategy instruction in acquiring vocabulary knowledge.

2. The survey has 2 parts: personal information and attitudes towards learning by Word Part strategy instruction

3. The data obtained will be useful for improving the teaching and learning, and there is no effect on your grades

4. The information you provide will be anonymous and confidential. It will be only used for research purposes and potential publications.

Part 1: Personal Information

Directions: Answer the following questions about your personal information by putting the ✓ in the bracket before filling in the information.

1. Gender ( ) Male   ( ) Female
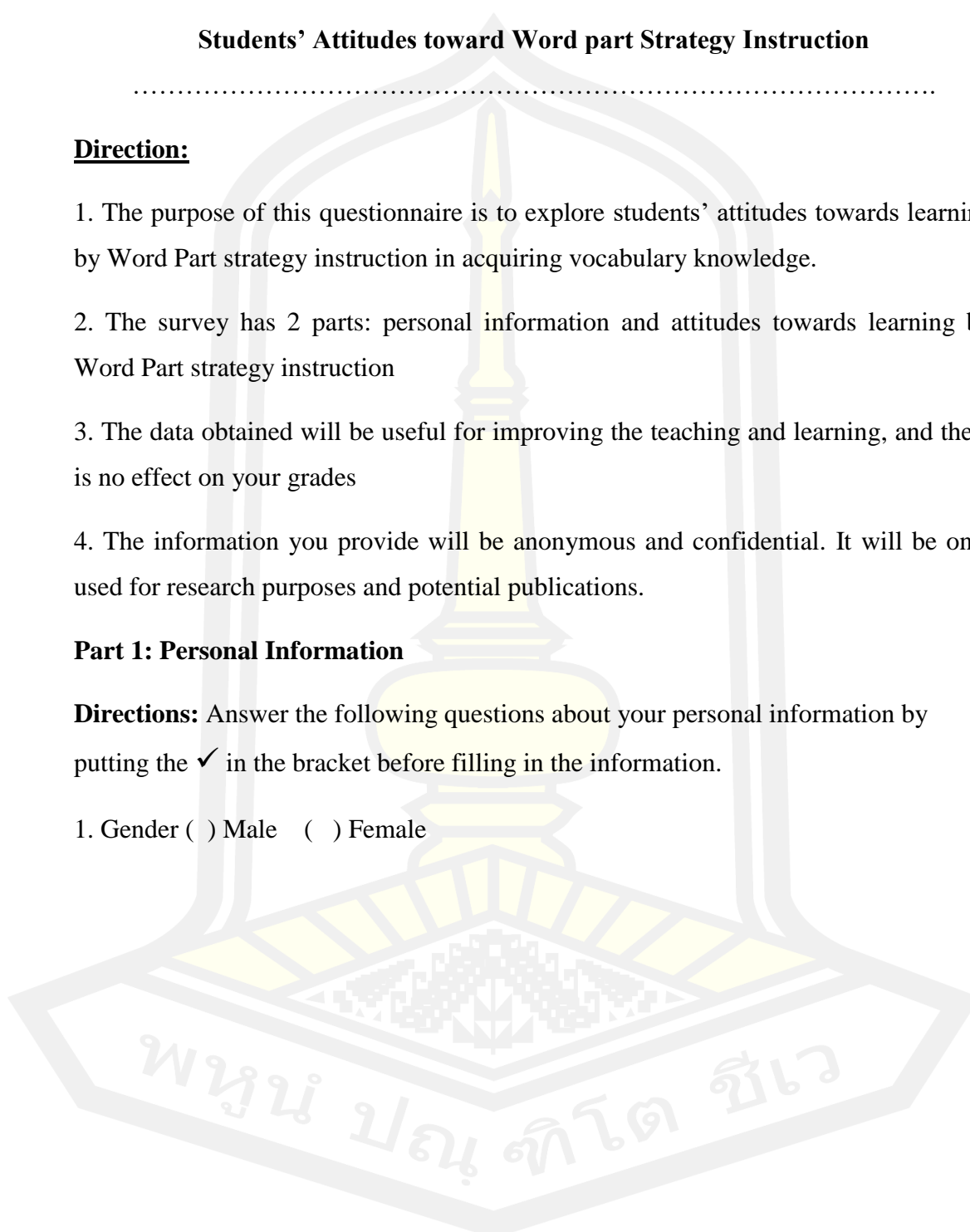
Part 2: Students' attitudes towards learning by Word Part strategy instruction

Directions: Please answer by checking (✓) sincerely according to your opinions

5 = Strongly agree 4 = Agree 3 = Neutral   2 = Disagree 1 = Strongly disagree

	Items	Score Level				
		5	4	3	2	1
1	Learning by word part strategy allow me to learn new vocabulary.					
2	I think word part strategy instruction facilitate me in becoming familiar with new words.					
3	I think using word part strategy instruction is a good way in learning vocabulary.					
4	I feel motivated when I learn vocabulary by word parts strategy.					
5	I feel much better when I learn vocabulary by word parts strategy to learn vocabulary.					
6	I think the fun activity enable me in recognizing the words.					
7	I think word part strategy instruction assist me in specify the part of speech.					
8	Learning by word part strategy enhance my vocabulary knowledge.					
9	I feel that learning vocabulary by word parts strategy would help me recognize words faster easily.					
10	I enjoy learning vocabulary by word parts strategy.					
11	Learning by word part strategy help me to improve my vocabulary knowledge.					
12	Word part strategy instruction is appropriate for learning vocabulary at my level.					
13	I feel comfortable when I learn by word part strategy.					
14	Word part activities help me build confidence and reduce stress in the classroom.					
15	Learning by word part strategy encourages me to learn more vocabulary.					

Appendix II-B: Questionnaire (Thai Version)

<div align="center">

แบบสอบถาม ทัศนคติของนักเรียนต่อการสอนแบบกลวิธีการแยกหน่วยคำ

</div>

ส่วนที่ 1: ข้อมูลส่วนตัว

คำชี้แจง โปรดทำเครื่องหมาย ✔ หน้าข้อความที่ตรงกับข้อมูลของผู้ตอบแบบสอบถาม

1. เพศ ( ) ชาย ( ) หญิง

ส่วนที่ 2: ทัศนคติของนักเรียนต่อการสอนแบบกลวิธีการแยกหน่วยคำ

คำชี้แจง โปรดทำเครื่องหมาย ✔ ในช่องระดับความคิดเห็นของท่าน

5 = เห็นด้วยมากที่สุด 4=เห็นด้วย 3=เห็นด้วยปานกลาง 2=ไม่เห็นด้วย 1=ไม่เห็นด้วยมากที่สุด

	หัวข้อ	ระดับคะแนน				
		5	4	3	2	1
1	การสอนแบบกลวิธีการแยกหน่วยคำทำให้ฉันได้เรียนรู้คำศัพท์ใหม่ๆ					
2	ฉันคิดว่าการสอนแบบกลวิธีการแยกหน่วยคำช่วยให้ฉันคุ้นเคยกับคำศัพท์ต่างๆ					
3	ฉันคิดว่าการสอนแบบกลวิธีการแยกหน่วยคำเป็นวิธีที่ดีในการเรียนรู้คำศัพท์					
4	ฉันรู้สึกมีแรงจูงใจในการเรียนภาษาอังกฤษเมื่อเรียนด้วยการสอนแบบกลวิธีการแยกหน่วยคำ					
5	ฉันรู้สึกว่าภาษาอังกฤษของฉันดีขึ้นมากเมื่อเรียนด้วยการสอนแบบกลวิธีการแยกหน่วยคำ					
6	ฉันคิดว่ากิจกรรมที่สนุกจะช่วยให้ฉันจดจำคำศัพท์ได้ดีขึ้น					
7	ฉันคิดว่าการสอนแบบกลวิธีการแยกหน่วยคำช่วยให้ฉันสามารถระบุชนิดของคำได้ถูกต้อง					
8	การเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำช่วยเพิ่มความรู้ด้านคำศัพท์ของฉัน					
9	ฉันรู้สึกว่าการเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำจะช่วยให้ฉันจำคำศัพท์ได้ง่ายขึ้น					

	หัวข้อ	ระดับคะแนน				
		5	4	3	2	1
10	ฉันสนุกกับการเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำ					
11	การเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำช่วยให้ฉันพัฒนาการจดจำคำศัพท์ได้ดีขึ้น					
12	การสอนแบบกลวิธีการแยกหน่วยคำเหมาะสำหรับการเรียนรู้คำศัพท์ในระดับของฉัน					
13	ฉันรู้สึกสบายใจเมื่อเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำเพื่อเรียนรู้คำศัพท์					
14	กิจกรรมการสอนแบบแยกหน่วยคำช่วยให้ฉันมีความมั่นใจและลดความตึงเครียดในห้องเรียน					
15	การเรียนรู้คำศัพท์โดยการสอนแบบกลวิธีการแยกหน่วยคำกระตุ้นให้ฉันอยากเรียนรู้คำศัพท์เพิ่มขึ้น					
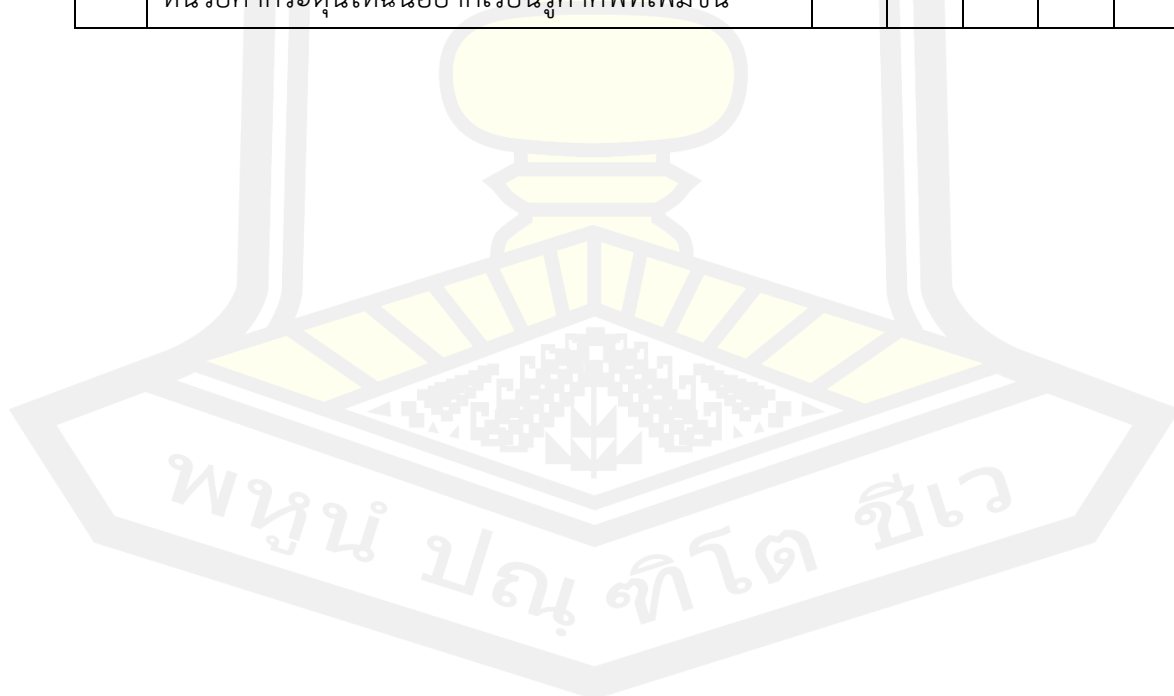
Appendix III: Ethics Approval

บันทึกข้อความ

ส่วนราชการ กองส่งเสริมการวิจัยและบริการวิชาการ มหาวิทยาลัยมหาสารคาม 1758

ที่ อว 0605.1(9)/๑๙๐๘   **วันที่** ๙ พฤษภาคม 2565

เรื่อง ขอส่งหนังสือรับรองจริยธรรมการวิจัยในคน

เรียน คณบดีคณะมนุษยศาสตร์และสังคมศาสตร์

       ตามที่นิสิตในสังกัดของท่านได้ยื่นโครงการวิจัยเพื่อขอรับการพิจารณาจริยธรรมการวิจัยในคน
จำนวน 1 เรื่อง ดังนี้

     1. ผลของกลวิธีการสอนหน่วยคำต่อความรู้ด้านคำศัพท์ของนักเรียนไทยในระดับชั้น ประถมศึกษา
        : The Effect of Word Parts Strategy Instruction on Vocabulary Knowledge of Thai
        Primary School Learners. (No.402/64)

       บัดนี้ ที่ประชุมคณะกรรมการจริยธรรมการวิจัยในคน มหาวิทยาลัยมหาสารคาม ครั้งที่ 4/2565
ได้พิจารณาโครงการวิจัยข้างต้นบนพื้นฐานด้านจริยธรรมการวิจัยในคนแล้ว เมื่อวันที่ 26 เมษายน 2565
พร้อมทั้งมีมติอนุมัติรับรองโครงการวิจัยแบบเร่งรัด (Expedited Review) ตามเอกสารใบรับรองจริยธรรมการ
วิจัยในคนที่ส่งมาพร้อมกันนี้ ทั้งนี้หากมีการเปลี่ยนแปลงใดๆ ในโครงการวิจัย ผู้วิจัยจักต้องยื่นขอรับการ
พิจารณาใหม่

       จึงเรียนมาเพื่อโปรดทราบและดำเนินการต่อไป

                     (นางฉวีวรรณ อรรคะเศรษฐัง)
           เลขานุการคณะกรรมการจริยธรรมการวิจัยในคน
                  มหาวิทยาลัยมหาสารคาม
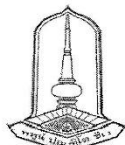
คณะกรรมการจริยธรรมการวิจัยในคน มหาวิทยาลัยมหาสารคาม

เอกสารรับรองโครงการวิจัย

เลขที่การรับรอง : 142-402/2565

ชื่อโครงการวิจัย (ภาษาไทย) การเปรียบเทียบความก้าวหน้าในการเรียนระหว่างนิสิตที่ได้รับการติดตามให้
คำปรึกษาจากอาจารย์ที่ปรึกษาอย่างต่อเนื่องและนิสิตที่ได้รับการดูแลแบบปกติ
ชื่อโครงการวิจัย (ภาษาอังกฤษ) The Effect of Word Parts Strategy Instruction on Vocabulary
Knowledge of Thai Primary School Learners.

ผู้วิจัย : นางสาวณัฐติยา บุบไชยา
หน่วยงานที่รับผิดชอบ : คณะมนุษยศาสตร์และสังคมศาสตร์
สถานที่ทำการวิจัย : โรงเรียนบ้านเขวาสะดืออีสานและโรงเรียนบ้านยางสินไชยหนองหาด

ประเภทการพิจารณาแบบ : แบบเร่งรัด

วันที่รับรอง : 27 เมษายน 2565   **วันหมดอายุ** : 26 เมษายน 2566

     ข้อเสนอการวิจัยนี้ ได้รับการพิจารณาและให้ความเห็นชอบจากคณะกรรมการจริยธรรมการวิจัยในคน
มหาวิทยาลัยมหาสารคามแล้ว และอนุมัติในด้านจริยธรรมให้ดำเนินการศึกษาวิจัยเรื่องข้างต้นได้ บนพื้นฐานของ
โครงร่างงานวิจัยที่คณะกรรมการฯ ได้รับและพิจารณา เมื่อเสร็จสิ้นโครงการแล้วให้ผู้วิจัยส่งแบบฟอร์มการปิด
โครงการและรายงานผลการดำเนินงานมายังคณะกรรมการจริยธรรมการวิจัยในคน มหาวิทยาลัยมหาสารคาม หรือ
หากมีการเปลี่ยนแปลงใดๆ ในโครงการวิจัย ผู้วิจัยจักต้องยื่นขอรับการพิจารณาใหม่

..........ภราดี   สว่างจิตร..........
(ผู้ช่วยศาสตราจารย์ เภสัชกรหญิงราตรี สว่างจิตร)
ประธานคณะกรรมการจริยธรรมการวิจัยในคน
มหาวิทยาลัยมหาสารคาม

ทั้งนี้ การรับรองนี้มีเงื่อนไขดังที่ระบุไว้ด้านหลังทุกข้อ (ดูด้านหลังของเอกสารรับรองโครงการวิจัย)

402/64

เอกสารชี้แจงสำหรับผู้ปกครองอาสาสมัครที่ตอบแบบสอบถาม (เด็กอายุ 7-18 ปี)
(สำหรับการตอบแบบสอบถามอายุต่ำกว่า 18 ปี)

เรียน   ผู้ปกครองของผู้ตอบแบบสอบถามทุกท่าน

เนื่องด้วยข้าพเจ้า นางสาวณัฐติยา บุบไชยา นิสิตปริญญาโท สาขาวิชาการสอนภาษาอังกฤษ คณะ
มนุษยศาสตร์ศาสตร์และสังคมศาสตร์ มหาวิทยาลัยมหาสารคาม กำลังดำเนินการวิจัย เรื่อง ผลของกลวิธีการสอน
หน่วยคำต่อความรู้ด้านคำศัพท์ของนักเรียนไทยในระดับชั้นประถมศึกษา (The Effect of Word Parts Strategy
Instruction on Vocabulary Knowledge of Thai Primary School Learners) โดยมีวัตถุประสงค์ของการ
วิจัย เพื่อศึกษาผลของกลวิธีการสอนแบบแยกคำและศึกษาความพึงพอใจของนักเรียนโดยการเรียนด้วยวิธีการสอน
แบบแยกคำ ประโยชน์ที่ท่านจะได้รับจากการวิจัยนี้ คือ นักเรียนจะรู้คำศัพท์เพิ่มขึ้นและจดจำได้นานขึ้น

หากท่านตัดสินใจให้เด็กในปกครองของท่านเข้าร่วมการวิจัยแล้ว ผู้วิจัยจะขอให้เด็กในปกครองของท่านตอบ
แบบสอบถามในประเด็น ความพึงพอใจต่อกลวิธีการสอนแบบแยกคำ ซึ่งประกอบด้วยคำถาม มีทั้งหมด 1 ส่วน จำนวน
15 ข้อ โดยใช้เวลาในการตอบแบบสอบถามประมาณ ...10.... นาที และจะขอรับแบบสอบถามคืนโดยผู้วิจัยจะไปเก็บด้วย
ตนเอง

หากเด็กในปกครองของท่านรู้สึกอึดอัด หรือรู้สึกไม่สบายใจกับบางคำถาม เด็กในปกครองของท่านมีสิทธิ์ที่จะไม่
ตอบคำถามเหล่านั้นได้ รวมถึงเด็กในปกครองของท่านมีสิทธิ์ถอนตัวออกจากโครงการนี้เมื่อใดก็ได้ โดยไม่ต้องแจ้งให้ทราบ
ล่วงหน้า และการไม่เข้าร่วมวิจัยหรือถอนตัวออกจากโครงการวิจัยนี้ จะไม่มีผลกระทบต่อนักเรียน
ข้อมูลในการตอบแบบสอบถามของเด็กในปกครองของท่านจะถูกเก็บรักษาไว้ ไม่เปิดเผยต่อสาธารณะเป็นรายบุคคล แต่
จะรายงานผลการวิจัยในภาพรวมเท่านั้น และจะดำเนินการทำลายข้อมูลที่เกี่ยวข้องภายหลังเสร็จสิ้นการวิจัย
การวิจัยครั้งนี้เด็กในปกครองท่านจะไม่ได้รับค่าตอบแทนและไม่เสียค่าใช้จ่ายใดๆ ทั้งสิ้น

หากท่านและเด็กในปกครองของท่านมีข้อสงสัยเกี่ยวกับงานวิจัย โปรดติดต่อได้ที่ (นางสาวณัฐติยา บุบไชยา
นิสิตปริญญาโท สาขาวิชาการสอนภาษาอังกฤษ คณะมนุษยศาสตร์ศาสตร์และสังคมศาสตร์ เบอร์โทรศัพท์ 061-5375111
และหากท่านและเด็กในปกครองของท่านได้รับการปฏิบัติไม่ตรงตามที่ระบุไว้หรือต้องการทราบสิทธิของท่านและเด็กใน
ปกครองของท่านขณะเข้าร่วมการวิจัยนี้ สามารถติดต่อได้ที่ "คณะกรรมการจริยธรรมการวิจัยในคน มหาวิทยาลัย
มหาสารคาม กองส่งเสริมการวิจัยและบริการวิชาการ มหาวิทยาลัยมหาสารคาม" โทร. 043-754416 เบอร์ภายใน 1755

ขอขอบพระคุณอย่างสูง

....

(   )

ผู้วิจัย
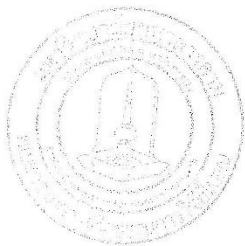
The Word Segmentation Test (WST)

Instructions: Break down a word into the smallest parts.

(คำชี้แจง ให้นักเรียนแยกส่วนประกอบของคำที่กำหนดให้)

	ตัวอย่าง	teacher	=	_teach_ + _er_
1.	artist	=	....
2.	caller	=	....
3.	interviewer	=	....
4.	traveler	=	....
5.	heavily	=	....
6.	beaches	=	....
7.	repeating	=	....
8.	appearance	=	....
9.	successful	=	....
10.	rejoined	=	....
11.	wanted	=	....
12.	collection	=	....
13.	visitor	=	....
14.	wonderful	=	....
15.	twisted	=	....
16.	unsafely	=	....
17.	excitement	=	....
18.	trainer	=	....
19.	national	=	....
20.	unattractive	=	....

The L1 Translation Test

Instructions: Read the Thai meaning and complete the English words with the given letter.

คำชี้แจง จงเขียนคำศัพท์ภาษาอังกฤษที่มีความหมายตรงกับคำศัพท์ในภาษาไทยโดย ตามอักษรที่กำหนดให้

E.g. คนรัก = L*over*

Word	Answer
1. อย่างระมัดระวัง	C................................
2. เริ่มใหม่	R................................
3. นักท่องเที่ยว	T................................
4. น่าสนใจ	I................................
5. ผู้ฝึก, ครูฝึก	T................................
6. อย่างมีความสุข	H................................
7. มหัศจรรย์	W................................
8. เต็มไปด้วยก้อนเมฆ	C ....
9. ความเมตตา, ความมีน้ำใจ	K................................
10. ซึ่งเต็มไปด้วยฝูงชน	C................................
11. ศิลปิน	A................................
12. ประสบความสำเร็จ	S................................
13. คนงาน, ลูกจ้าง	W................................
14. ปกคลุมไปด้วยหิมะ	S................................
15. อย่างหนัก	H ....
16. ไม่สะอาด	U................................
17. เหมาะสม, มีเหตุผล	R................................
18. ผู้เยี่ยมเยือน, แขก	V................................
19. อันตราย	D................................
20. สวยงาม	B................................

Test of Word Part Use

Instruction: Write a correct form of a word that provided in the blanket for each blank in the sentence. Please specify the part of speech as well.

(นำคำศัพท์ที่กำหนดให้ในวงเล็บมาเติมลงในช่องว่างให้ถูกต้อง พร้อมทั้งระบุชนิดของคำ)

No.	Sentence	Part of speech			
		noun	verb	adverb	adjective
E.g.	She is <u>calling</u> her friends. *(call)*				/
E.g.	This is a <u>ruler</u>. *(rule)*	/			
1.	An .... *(interview)* is in the office.				
2.	The ....*(instruct)* is teaching in class.				
3.	Minny is ....*(visit)* her parents next week.				
4.	Malee and Tom are .... *(swim)*.				
5.	Jenny loves .... *(shop)*.				
6.	I am .... *(excite)*.				
7.	My brother is a .... *(work)*.				
8.	Jim comes back home .... *(safe)*.				
9.	It is raining .... *(heavy)*.				
10.	I want to be an ....*(art)*.				
11.	She is .... T.V. *(watch)*				
12.	You have to be .... *(care)*.				
13.	I like her .... *(kind)*.				
14.	It is .... *(snow)* now.				
15.	It is ....*(cloud)*.				
16.	My life is .... *(wonder)*.				
17.	He is .... *(collect)* stamps.				
18.	There are a lot of .... *(travel)* in Phuket.				
19.	Snake is one of the most .... *(danger)* animals.				
20.	They eat pizza .... *(happy)*.				
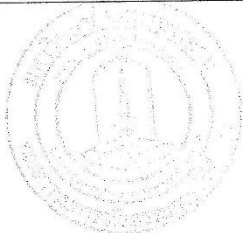
แบบสอบถาม

แบบสอบถามความคิดเห็นของนักเรียนที่มีต่อวิธีการสอนแบบใช้กลยุทธ์การแยกคำ

(Word part strategy instruction)

คำชี้แจง

1. แบบสอบถามนี้ต้องการทราบความคิดเห็นของนักเรียน แต่ละข้อคำถามไม่มีข้อใดถูกหรือผิด ดังนั้นให้
   นักเรียนตอบคำถามเพื่อแสดงความรู้สึกของนักเรียนจริง ๆ และแบบสอบถามนี้จะใช้ประโยชน์เฉพาะการ
   วิจัยเท่านั้น ไม่มีผลต่อการเรียนของนักเรียนแต่อย่างใด

2. แบบสอบถามความคิดเห็นมีทั้งหมด 15 ข้อ

3. ให้นักเรียนทำเครื่องหมาย (/) ลงในช่องที่ตรงกับความรู้สึกหรือความคิดเห็นของนักเรียน แต่ละคำถาม
   นักเรียนสามารถตอบได้เพียงคำตอบเดียวเท่านั้น

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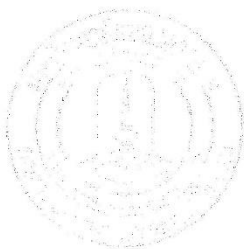
แบบสอบถาม

แบบสอบถามความคิดเห็นของนักเรียนที่มีต่อวิธีการสอนแบบใช้กลวิธีการแยกคำ

(Students' Attitude toward Word Part Strategy Instruction)

คำชี้แจง

1. แบบสอบถามนี้ต้องการทราบความคิดเห็นของนักเรียน แต่ละข้อคำถามไม่มีข้อใดถูกหรือผิด ดังนั้นให้
นักเรียนตอบคำถามเพื่อแสดงความรู้สึกของนักเรียนจริง ๆ และแบบสอบถามนี้จะใช้ประโยชน์เฉพาะการ
วิจัยเท่านั้น ไม่มีผลต่อการเรียนของนักเรียนแต่อย่างใด

2. แบบสอบถามความคิดเห็นมีทั้งหมด 15 ข้อ

3. ให้นักเรียนทำเครื่องหมาย (/) ลงในช่องที่ตรงกับความรู้สึกหรือความคิดเห็นของนักเรียน แต่ละคำถาม
นักเรียนสามารถตอบได้เพียงคำตอบเดียวเท่านั้น

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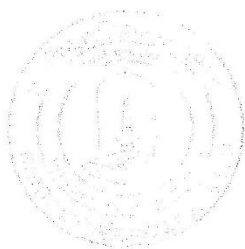
แบบสอบถามความคิดเห็นของนักเรียนที่มีต่อวิธีการสอนแบบใช้กลวิธีการแยกคำ

คำชี้แจง ให้นักเรียนทำเครื่องหมาย (/) ลงในช่องที่ตรงกับความรู้สึกหรือความคิดเห็นของนักเรียน แต่ละคำถามนักเรียนสามารถตอบได้เพียงคำตอบเดียวเท่านั้น

ข้อความ	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	ไม่แน่ใจ	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1. ฉันรู้จักคำศัพท์เพิ่มมากขึ้นหลังจากเรียนด้วยกลวิธีการแยกหน่วยคำ					
2. สื่อการสอนเหมาะสมกับเนื้อหาที่สอน					
3. มีการเตรียมกิจกรรมการสอนที่ดี					
4. ฉันคิดว่าเนื้อหาและคำศัพท์ไม่ยากหรือง่ายเกินไป					
5. เนื้อหาคำศัพท์ที่เรียนเหมาะสมกับเวลา 1 ชั่วโมง					
6. ฉันชอบกิจกรรมการสอนกลวิธีการแยกหน่วยคำที่หลากหลาย					
7. กิจกรรมที่สนุกช่วยให้ฉันจดจำคำศัพท์ได้ดีขึ้น					
8. แต่ละกิจกรรมในการเรียนช่วยกระตุ้นให้ฉันอยากเรียนรู้คำศัพท์เพิ่มขึ้น					
9. การเรียนโดยกลวิธีการแยกหน่วยคำช่วยให้ฉันเรียนรู้คำศัพท์จากหนังสือเรียนเล่มอื่น ๆ ด้วย					
10. ฉันเรียนคำศัพท์ได้ดีขึ้นโดยวิธีการนำเสนอคำศัพท์ที่หลากหลาย เช่น รูปภาพ เสียง ตัวอย่างข้อความ เป็นต้น					
11. กิจกรรมการสอนกลวิธีแยกหน่วยคำช่วยให้ฉันมีความมั่นใจและลดความตึงเครียดในห้องเรียน					
12. การเรียนโดยกลวิธีการแยกหน่วยคำช่วยให้ฉันระบุชนิดของคำได้					
13. กลวิธีการแยกหน่วยคำช่วยให้ฉันเดาคำศัพท์ที่ไม่รู้ได้ในบริบทที่ใกล้เคียงกัน					
14. ฉันรู้สึกสนุกสนานเมื่อเรียนด้วยกลวิธีการแยกหน่วยคำ					
15. การเรียนด้วยกลวิธีการแยกคำช่วยเพิ่มทักษะการสื่อสารของฉันได้ด้วย					
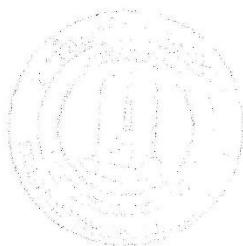
Students' Attitude toward Word Part Strategy Instruction

Statement	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. I learned more vocabulary after learning by word part strategy.					
2. The teaching materials are suitable for the content.					
3. There is a good preparation for each activity.					
4. I think the content and vocabulary are not too difficult or too easy.					
5. The vocabulary is appropriate for 1 hour of the instruction.					
6. I like the variety activity of word parts strategy instruction.					
7. The fun activity helps me memorize vocabulary better.					
8. Each activity encourages me to learn more vocabulary.					
9. Learning by word parts strategy helped me access more vocabulary in other textbooks.					
10. I learned vocabulary better when it was presented in multiple ways. (E.g., Pictures, Sound, Definition, Examples, etc.)					
11. The word parts strategy activities help me build confidence and reduce stress in the classroom.					
12. Learning by word part strategy instruction help me identify the part of speech.)					
13. I can guess the unknow word in similar context after I learned by word part strategy instruction.					
14. I enjoy learning by word part strategy.					
15. Learning by word parts strategy instruction enhanced my communication skill.					

ECMSU01-06.02

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แบบยินยอมให้ทำการวิจัยสำหรับอาสาสมัครอายุ 7-18 ปี

</div>

ข้าพเจ้า (นาย /นาง /นางสาว)..นามสกุล..อายุ.................ปี เกี่ยวข้อง
เป็นบิดา/มารดา/ผู้ปกครองของ (ด.ญ./ด.ช./นาย/นางสาว)...............................นามสกุล.............................อายุ............ปี

<u>ขอแสดงความยินยอมให้เด็กในปกครองของข้าพเจ้าเข้าร่วมการวิจัย</u> ในโครงการวิจัยเรื่อง "ผลของกลวิธีการสอนหน่วยคำ
ต่อความรู้ด้านคำศัพท์ของนักเรียนไทยในระดับชั้นประถมศึกษา"

      ข้าพเจ้าและเด็กในปกครอง/ในความดูแลของข้าพเจ้า ได้รับทราบรายละเอียดเกี่ยวกับที่มาและวัตถุประสงค์ใน
การทำวิจัย รายละเอียดขั้นตอนต่างๆ ที่จะต้องปฏิบัติหรือได้รับการปฏิบัติ ความเสี่ยง/อันตราย และประโยชน์ซึ่งจะ
เกิดขึ้นจากการวิจัยเรื่องนี้ ข้าพเจ้าได้อ่านรายละเอียดในแบบชี้แจงสำหรับผู้อาสาสมัครหรือผู้มีส่วนร่วมในการวิจัยโดยตลอด
และได้รับคำอธิบายจากผู้วิจัย จนเข้าใจเป็นอย่างดีแล้ว

      ตลอดจนการรับรองจากผู้วิจัยที่จะเก็บรักษาข้อมูลของเด็กในปกครองของข้าพเจ้าไว้เป็นความลับ และจะไม่ระบุ
ชื่อหรือข้อมูลส่วนตัวเป็นรายบุคคลต่อสาธารณชน โดยผลการวิจัยจะนำเสนอในลักษณะภาพรวมที่เป็นการสรุป
ผลการวิจัยเพื่อประโยชน์ทางวิชาการเท่านั้น

      ข้าพเจ้าจึงสมัครใจให้เด็กในปกครอง/ในความดูแลของข้าพเจ้าเข้าร่วมในโครงการวิจัยนี้ ภายใต้เงื่อนไขที่ระบุไว้
ในแบบชี้แจงอาสาสมัคร โดยข้าพเจ้ายินยอมให้เด็กในปกครอง/ในความดูแลของข้าพเจ้า เข้าร่วมในการวิจัย และเด็กใน
ปกครอง/ในความดูแลของข้าพเจ้าสมัครใจเข้าร่วมการวิจัยนี้ ภายใต้เงื่อนไขที่ระบุไว้ในแบบชี้แจงอาสาสมัคร *ตอบ
แบบสอบถามเกี่ยวกับทัศนคติที่มีต่อกลวิธีการสอนแบบแยกคำ เป็นระยะเวลา 8 สัปดาห์ จำนวน 2 เรื่องต่อสัปดาห์ เมื่อ
เสร็จสิ้นการวิจัยแล้วข้อมูลที่เกี่ยวข้องกับผู้มีส่วนร่วมในการวิจัยจะถูกเก็บไว้เป็นความลับ*

      ข้าพเจ้ามีสิทธิให้ผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าหรือเป็นความประสงค์ของผู้ที่อยู่ในปกครอง/ใน
ความดูแล ถอนตัวออกจากการวิจัยเมื่อใดก็ได้ โดยไม่ต้องแจ้งเหตุผล ซึ่งการถอนตัวออกจากการวิจัยนั้น จะไม่มีผลกระทบ
ในทางใดๆ ต่อผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าและตัวข้าพเจ้าทั้งสิ้น *โดยที่ไม่มีผลกระทบต่อผลต่อการศึกษา
และต่อการเรียน*

      ข้าพเจ้าได้รับคำรับรองว่า ผู้วิจัยจะปฏิบัติต่อผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้า ตามข้อมูลที่ระบุไว้
ในเอกสารชี้แจงผู้เข้าร่วมการวิจัย และข้อมูลใดๆที่เกี่ยวข้องกับผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้า ผู้วิจัยจะ
เก็บรักษาเป็นความลับ โดยจะนำเสนอข้อมูลจากการวิจัยเป็นภาพรวมเท่านั้น ไม่มีข้อมูลใดในการรายงานที่จะนำไปสู่
การระบุตัวผู้ที่อยู่ในปกครอง/ในความดูแลของข้าพเจ้าและตัวข้าพเจ้า

      หากข้าพเจ้าและผู้ที่อยู่ในความปกครองของข้าพเจ้ามีข้อข้องใจเกี่ยวกับขั้นตอนของการวิจัย ข้าพเจ้าสามารถ
ติดต่อกับ *นางสาวณัฐติยา บุนไชยา โทร.0615375111* ได้ตลอด 24 ชั่วโมง

      ข้าพเจ้าและผู้ที่อยู่ในปกครองของข้าพเจ้าเข้าใจข้อความในแบบคำชี้แจงอาสาสมัคร และแบบยินยอมนี้โดย
ตลอดแล้ว จึงลงลายมือชื่อไว้

ลงชื่อ..อาสาสมัคร   ลงชื่อ..ผู้ปกครอง
    (..)   (..)
    วันที่.........เดือน....................พ.ศ............   วันที่.........เดือน....................พ.ศ............

      ลงชื่อ..ผู้ให้ข้อมูลและขอความยินยอม
      (   )
      วันที่.........เดือน....................พ.ศ............

BIOGRAPHY

NAME	Miss Nuttiya Bubchaiya
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ADDRESS	10/18 Khao-yai Sub-district, Kantarawichai District, Maha Sarakham Province, 44150
POSITION	Teacher
PLACE OF WORK	Ban Kwaosadue-Isan school, Kosumphisai District, Maha Sarakham Province, 44140
EDUCATION	2009 Junior High School in Sarakhampittayakhom School
	2012 Senior High School in Sarakhampittayakhom School
	2017 Bachelor of Education English major, Rajabhat Mahasarakham University
	2022 Master of Education in English Language Teaching (M.Ed), Mahasarakham University