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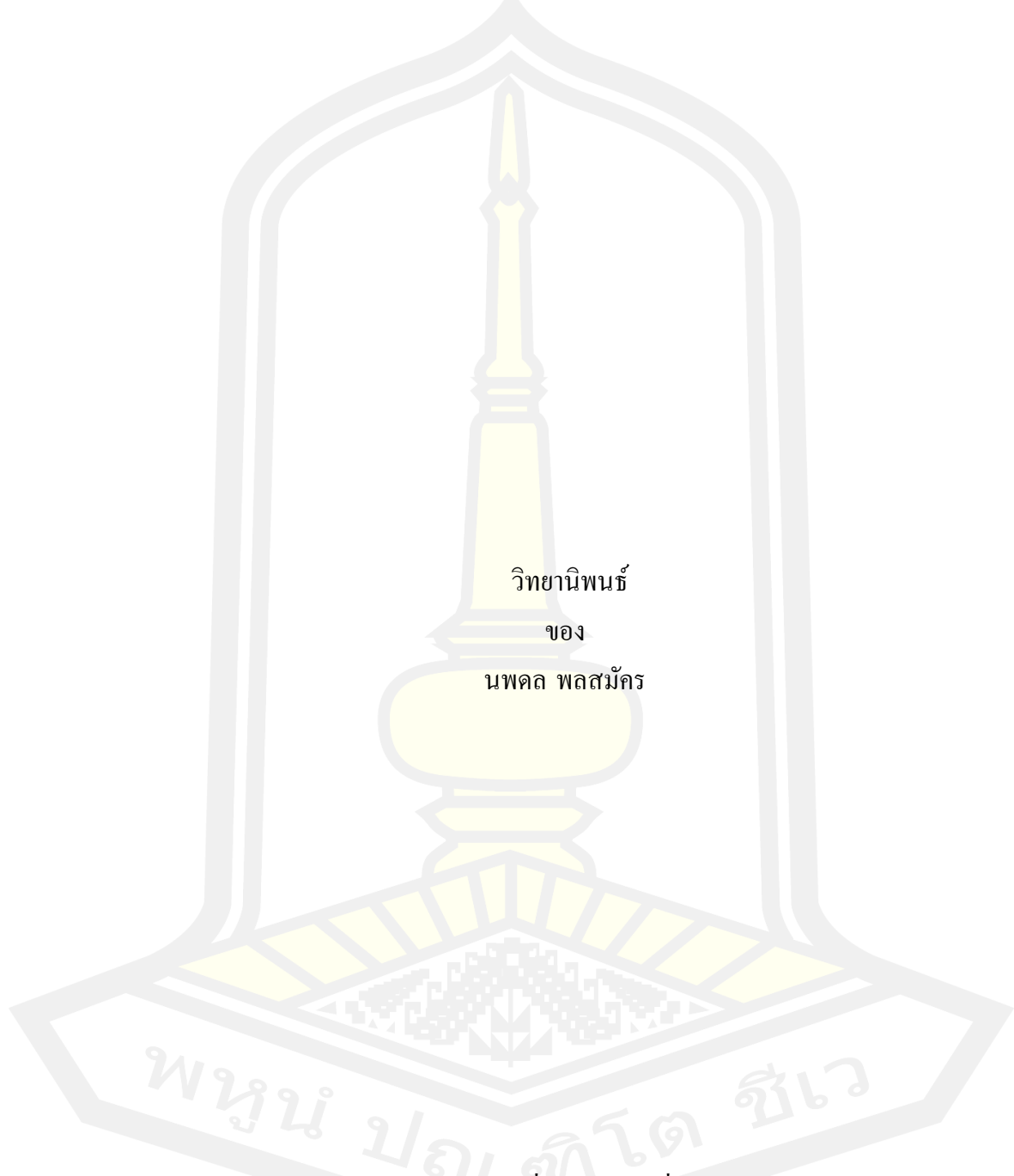Primary School Learners

Noppadon Ponsamak

A Thesis Submitted in Partial Fulfillment of Requirements for

degree of Master of Education in English Language Teaching

April 2023

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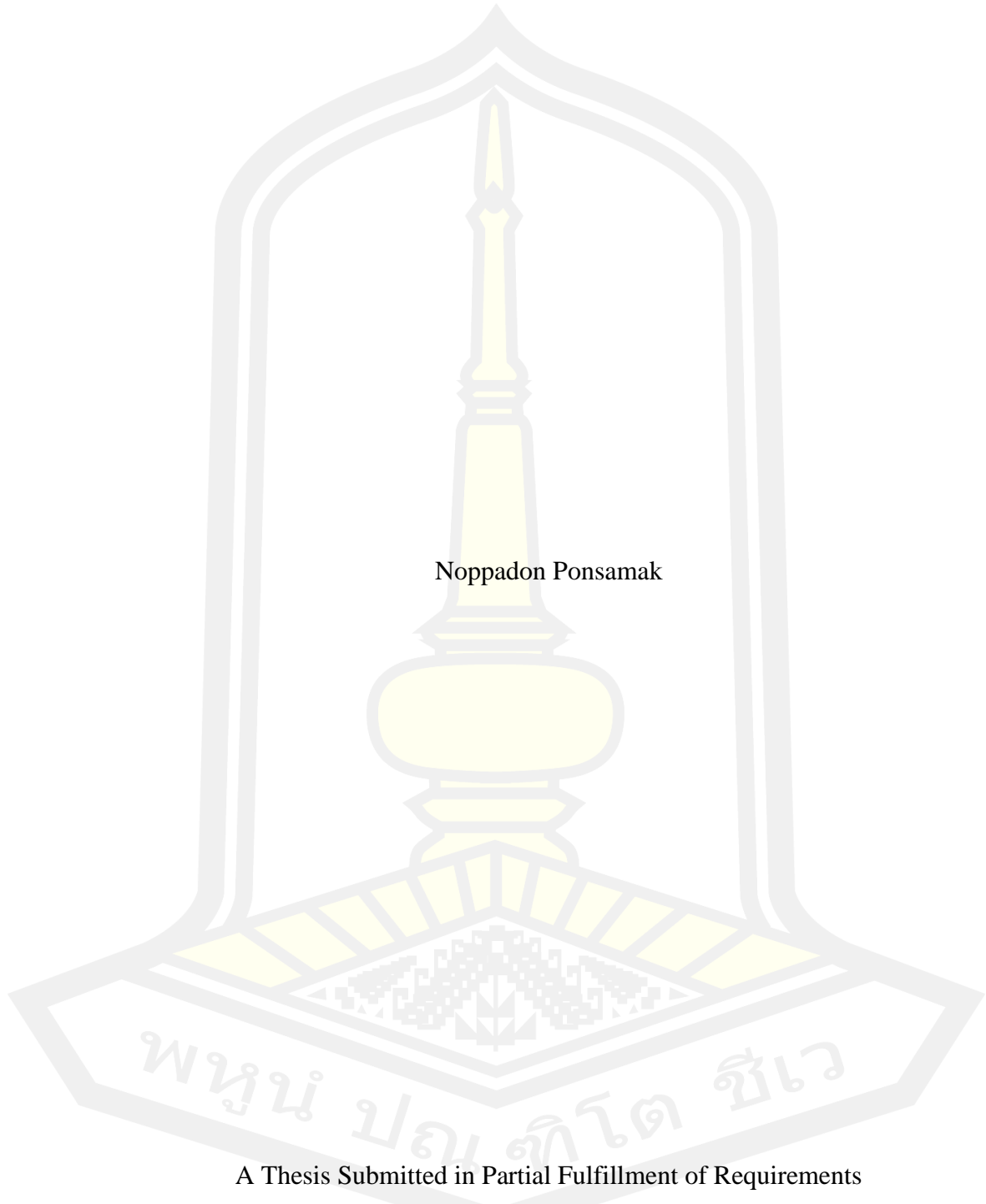ในฐานะภาษาต่างประเทศ

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Primary School Learners

Noppadon Ponsamak

A Thesis Submitted in Partial Fulfillment of Requirements

for Master of Education (English Language Teaching)

April 2023

The examining committee has unanimously approved this Thesis, submitted by Mr. Noppadon Ponsamak , as a partial fulfillment of the requirements for the Master of Education English Language Teaching at Mahasarakham University

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ABSTRACT

This mixed methods study investigated the role of Facebook, a social instructional platform, in enhancing Thai EFL primary school learners' vocabulary knowledge. The primary goal of the study was to examine how using Facebook as an instructional platform improves the written form of English vocabulary knowledge in Thai EFL primary school learners. The study further explored whether education levels influence the ability to acquire a word. Yet, the participants' perceptions were also investigated. Twenty-four students participated in this study aged between eleven to twelve. Two tests were designed and validated before the main study to measure students' receptive and productive knowledge of word form. A focus group was also used to gain deeper insight into students' perspectives about Facebook input on vocabulary learning. Descriptive and inferential statistics were performed to analyze quantitative data, while content analysis was utilized to analyze qualitative data. The results showed that students significantly improved their receptive and productive vocabulary knowledge, and the knowledge of word form (written) developed according to learners' education level. In addition, the qualitative findings showed the usefulness of Facebook input. Indeed, the participants viewed Facebook input as an inviting and stimulating atmosphere and a helpful platform to acquire vocabulary by engaging and sharing with their peers in the learning activity. Overall, the study indicates that Facebook input is an efficient alternative platform for vocabulary teaching outside of the classroom context. Other implications for practitioners and suggestions for further studies are also addressed.

Keyword : Vocabulary knowledge, Facebook input, vocabulary learning, written form, vocabulary enhancement

ACKNOWLEDGEMENTS

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CHAPTER I
INTRODUCTION

1.1 Background to the study

Vocabulary is the core of any language and is possibly essential to mastering a second language (L2). Schmitt (2010) also stated, "One thing that all of the partners involved in the learning process (students, teachers, materials writers, and researchers) can agree upon is that learning vocabulary is an essential part of mastering a second language" (p. 4). In addition, Wilkins (1972) suggested that "Without grammar, very little can be conveyed; without vocabulary, nothing at all can be conveyed" (p. 111). From this perspective, learning vocabulary is a primary and critical stage of mastering a second/foreign language. The significance of vocabulary is highlighted by plenty of evidence. One strand of this evidence is the high correlations between vocabulary and various language proficiency measures. For example, a close relationship has been shown between vocabulary size and depth and L2 writing performance (e.g., correlations of .40-.57, Sukying, 2023), accounting for about 29-35% of the variance in EFL learners' writing performance according to regression analysis. Moreover, Laufer and Goldstein (2004) indicated that knowing the form-meaning link of words explained about 47% of the total variance in students' overall English grades. Given that these findings reflected general abilities in language skills (reading, listening, speaking, and writing), the above figures suggest that vocabulary knowledge contributes greatly to overall language achievement.

Vocabulary is a time-consuming part of learning a foreign language. It takes time and flows like a continuous process once you have settled on the fundamentals of a language. Throughout this process, learners become familiar with the words they come across. Some researchers indicate that the frequency of usage and the significant number of exposures to various forms and contexts promote the acquisition of new vocabulary (Nation, 1990; Webb & Nation, 2017). Thus, the teacher may need to provide as many activities as possible to ensure learners encounter and contribute to enough real-world language environments. Yet it has to be comfortable for them to participate to succeed in acquiring language (Krashen, 1982).

Vocabulary is a critical part of the English learning procedure, and the first stage in the vocabulary acquisition process is establishing an initial form-meaning link (Laufer, 1988; Nation, 2013, 2022; Saigh & Schmitt, 2012; Schmidt, 2010). Researchers have argued that word knowledge is formed on three interrelated aspects: form, meaning, and use, and each aspect integrates a receptive and productive feature (Nation, 2013, 2022; Schmitt, 2010; Sukying, 2018, 2020). According to Nation (2013, 2022), the aspect of word form includes spoken, written, and word parts knowledge. The aspect of word meaning describes a form-meaning link, concepts and referents, and associations knowledge. In contrast, the aspect of word use involves grammatical functions, collocations, and constraints on use. Teng (2016) explored the impact of word occurrence frequencies on the learning and retention of unknown words, and it was found to significantly affect productive and receptive knowledge of word form. Thus, providing more chances for learners to encounter the frequency of word exposure due to language input is essential for word form development.

Psychologists have emphasized the interplay between students' learning ability and the learning environment in which they develop but attribute considerable importance to the learning environment. They hypothesized that what students needed to know was essentially available in the language they were exposed to as they heard or/and saw it used in thousands of hours of interaction with other people and objects around them. In addition, vocabulary researchers have shown that exposure to the target language is necessary for acquiring vocabulary items in language learning. Vocabulary researchers have shown that learners need to encounter vocabulary several times to be known (Bisson et al., 2015; Teng, 2016; Sedita, 2005; Schmitt, 2008). To recap, a considerable body of literature emphasizes the close relationship between learners' cognitive development and L2 acquisition (Li, Ellis & Zhu, 2019; Luque & Morgan-Short, 2021).

However, in an EFL context, inadequate vocabulary knowledge remains a vital problem for most EFL learners; Thai students are no exception. One reason might be the inadequacy of English language exposure. L2 learners lack opportunities to repeatedly meet newly learned words in language classrooms. New words are presented in the class in various ways of learning, but the learners hardly encounter

the situation or opportunity to use them in real life. This could lead to inadequate vocabulary knowledge and a lack of success in learning L2. Other issues resulting in the shortage of vocabulary knowledge may be the limited class time causing fewer chances to review the learned words. The learners have about three hours per week of English class. Learning vocabulary through social media may assist the learners in reviewing what is learned again. The posts or comments of the previous lesson remain the same, and the learners can get back and relearn them anytime. Thus, the lessons learned via an online platform, herewith Facebook, may allow the learners to learn, relearn, and provide more chances to encounter the target words.

Social media significantly affects public contacts, international communications, and potential education. Specifically, technologies such as Facebook and Twitter could be considered instructional platforms that deliver vocabulary exposure to learners since they have become prevalent and are used in our lives (Sim & Pop, 2014). And the most used technology for social interactions is Facebook (Statista, 2022). It is suggested that foreign language learning requires interaction among learners and teachers; Facebook supports social interaction opportunities among users (Pempek, 2009) and improves social presence (Bateman & Willems, 2012). Additionally, Schmidt (2010) claimed that people learn things when they intentionally pay attention to them, and if they do not pay much attention to them, they tend to learn nothing. Social media are the platforms that users pay considerable attention to communicate with others. With its significant number of users, Facebook is considered a tremendous potential educational tool; teachers cannot deny its possible benefit in this digital era (Rodliyah, 2016). It can be utilized to import and share class activities, post words and definitions for vocabulary review, share resources, and share ideas about class discussions in English on a classroom page or group for deliberate vocabulary learning (Espinosa, 2015; TeachThought, 2012). A body of research has shown that social media, especially Facebook, can enhance students' language learning (Tinggie et al., 2021; Abbas, Gulzar & Hussain, 2019; Al-Smadi, 2013). Al-Smadi (2013) studied whether the Facebook instructional strategy could affect students' vocabulary knowledge. He compared the Facebook instructional strategy and the conventional way of teaching. The result showed that the Facebook strategy of teaching vocabulary is more effective than the conservative method. Similarly, Tinggie et al. (2021) also

investigated whether utilizing the feature of Facebook stories in primary school pupils in Negeri Sembilan could improve their vocabulary knowledge. The result indicated that the participants portrayed major improvements. And it was proven to enhance pupils' vocabulary learning. Again, Facebook promotes EFL students' motivations and perceptions of learning English (Tananuraksakul, 2015; Choy & Troudi, 2006). Fithriai et al. (2019) also found that social media applications had great potential to be integrated into EFL language skill classes in the Indonesian EFL context. Moreover, Hanafiah & Yunus (2017) argued that Facebook features, uploading pictures and videos, and sharing links can serve EFL primary learners a fun way to learn English. As such, utilizing Facebook as an educational platform for learning interaction through activities designed for EFL learners is still needed.

Some researchers indicated the effects of social media on English learning behavior. For example, Tananuraksakul (2015) investigated how Facebook affected English learning development. Most of the participants were above secondary learners. Only a few researchers examined whether Facebook could show significant benefits in helping EFL primary learners learn English, especially the form of a word, which is fundamental to any language. In the current context, the learners have about four hours a week to study English. They all study English via books and lectures most of the time due to the limited resources and time provided by the school, so additional ways of learning outside the class may be needed. One of the most convenient platforms to apply as an additional instructional tool for learners could be online social media. From the classroom observation of the participants' word knowledge, they seem to face difficulties in spelling. Spelling is essential for acquiring other aspects of vocabulary, especially for primary level learners. It could lead to severe issues in learning L2 and negative attitudes towards English if they still encounter such problems. Nowadays, primary learners have started to have their own devices, such as mobile phones and tablets, to study online after the situation of Covid-19 spreads. They also create ways to connect to friends and teachers to communicate through many kinds of social media, one of which is Facebook.

In the Thai context, some only investigated the development of other aspects of English; grammar, writing, and speaking. For example, Linh & Suppasetseree (2016)

conducted a study to develop an instructional design model to assist Thai tertiary learners in collaboratively using Facebook groups to enhance the participants' English writing skills. Little research focuses on the written form of receptive and productive word knowledge. Moreover, research on EFL primary school learners' vocabulary development through the use of Facebook is limited. This could make the study more significant and worth investigating to fulfill the gap. Therefore, the present study seeks to determine whether activities provided on a Facebook closed group can develop Thai EFL primary school learners' vocabulary in terms of the written form of a word. It also investigates Thai EFL primary school learners' perceptions and feeling towards Facebook on improving vocabulary.

1.2 Purposes of the research

This current research aims to enhance Thai EFL primary school learners' vocabulary using Facebook and see the impact of education levels on learners' ability to learn vocabulary. It also investigate Thai EFL primary school learners' perceptions of using Facebook to improve vocabulary. The research questions formulated to guide the study are as follows:

1. What are the effects of Facebook input to enhance Thai EFL primary school learners' vocabulary development?

2. How do education levels influence Thai EFL primary school learners' ability to acquire vocabulary?

3. How do Thai EFL primary school learners perceive Facebook input to enhance vocabulary development?

1.3 Scope of the research

This study focused on Thai EFL primary school learners acquiring the written form of word knowledge by utilizing Facebook as a supplemental instructional platform and also investigated the participants' perceptions of using Facebook to improve their vocabulary knowledge by utilizing a focus group to gain a deeper understanding of participants' perceptions and feelings with regard to activities performed on the Facebook group. The independent variable was Facebook as an instructional platform,

and the dependent variable was the written form of word knowledge. The participants were 24 Thai EFL primary learners aged between 11-12. They were from one small-sized school in the northeast of Thailand. This current study applied a mixed-methods approach. Mixed methods research combined qualitative and quantitative approaches in the same study. A one-group pretest-posttest research design was used to investigate the effects of the treatment after the experiment. A focus group was also utilized at the end of the experimentation to understand participants' perceptions and feelings toward the treatment used by applying content analysis to analyze qualitative data. The study was conducted over two months in the second semester of the 2022 academic year.

1.4 Significance of the study

Vocabulary is a stepping stone for second language learners, especially at the primary level. Students with extensive vocabulary build on their English language learning journey better and faster than those with less vocabulary knowledge. This study yielded fruitful information for pedagogues, educators, and researchers with implications for designing new vocabulary teaching plans, courses, and meaningful language-based activities through the use of Facebook as a supplemental instructional platform. Indeed, this study proved the effectiveness of using Facebook in enhancing vocabulary learning. Moreover, this study might shed some light on the complex nature of word knowledge, providing deeper insights into the roles of hearing and seeing new vocabulary items. The current study evinces that vocabulary is acquired at different times and rates.

1.5 Definitions of key terms

Receptive knowledge of a word refers to the ability to recognize a word's spelling or form.

Productive knowledge of a word refers to the ability to recall the written form of a word.

Facebook refers to an online social media platform providing multimedia inputs created to enhance students' written form of vocabulary knowledge.

Facebook interaction refers to the learner-content interaction occurring on the Facebook closed group.

Facebook input refers to the multimedia or materials (e.g., content videos) provided on the Facebook closed group for the participants to consciously interact with.

Thai EFL primary school learners refer to twenty-four Thai primary school students as the current study's participants.

Vocabulary knowledge refers to the knowledge of lexical items, which involves at least nine different aspects of knowledge covering form, meaning and use. Each aspect involves receptive and productive knowledge (Nation, 2013, 2022).

1.6 Thesis organization

This thesis consists of five chapters. Chapter I provides the readers with an overview of the study. It begins with the study background and the importance of vocabulary knowledge in language use. This chapter follows issues in vocabulary learning and teaching. The chapter also describes the scope of the study, the significance of the study, and definitions of key terms.

Chapter II reviews the theoretical framework for the study. First, it conceptualizes vocabulary knowledge, and the chapter points out vocabulary learning and teaching, particularly in an EFL context. This chapter then critically reviews previous studies related to the study to identify the gaps.

Chapter III outlines the research methodology. The chapter describes the research paradigm and design, participants and setting, the instrumentation, methods, data collection procedure and data analysis techniques.

Chapter IV presents the study results and provides a preliminary discussion of the results. The results report includes descriptive and inferential statistics for the quantitative results, while the content analysis in relation to thematic established is presented for the qualitative findings.

Chapter V provides detailed discussions of the research findings and relates them to the earlier literature. The interpretation of the findings is also presented. The chapter

also highlights the essential findings and their contributions to the field of study from theoretical and pedagogical perspectives. The chapter ends with implications for pedagogical practices and recommendations for future studies.
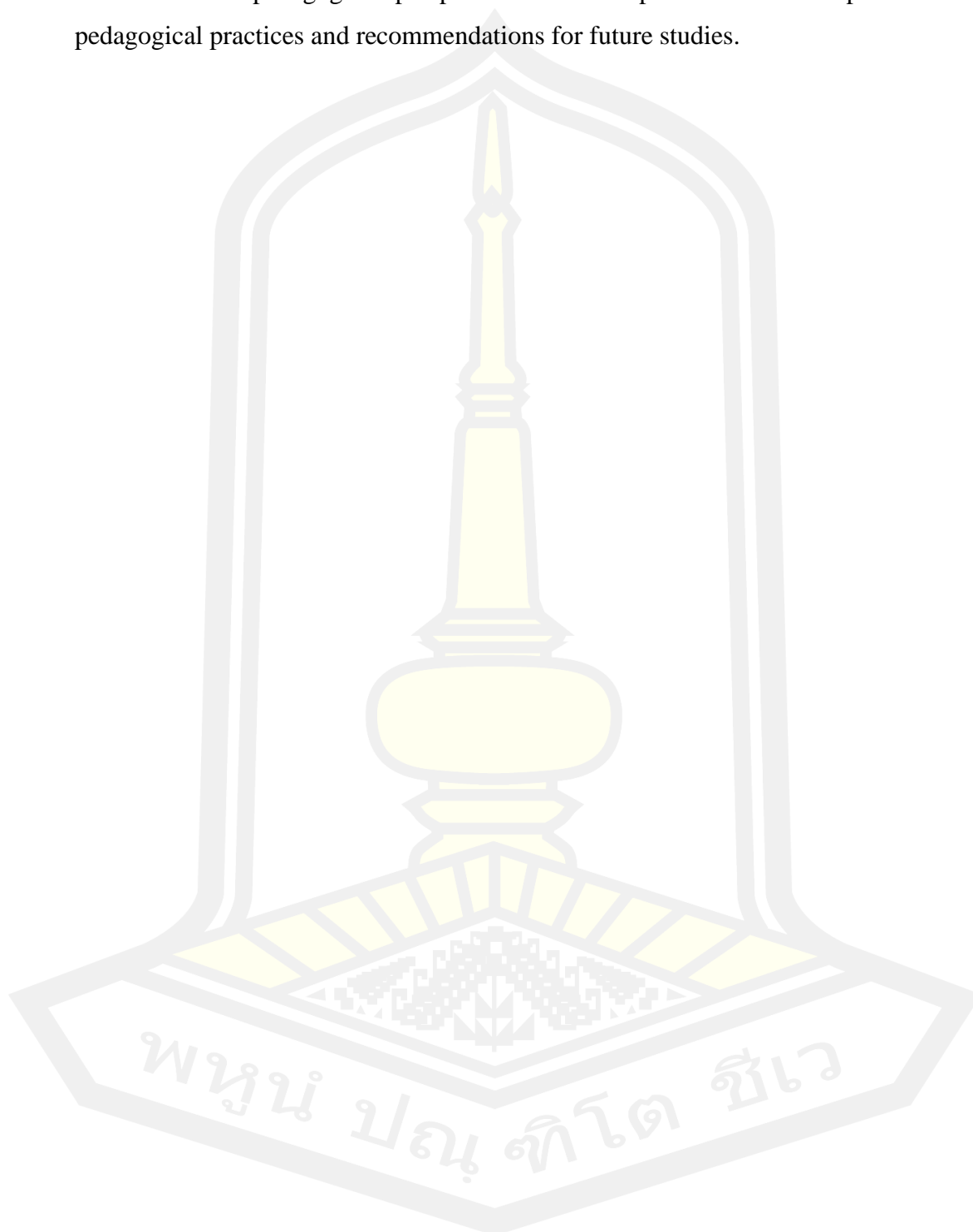
CHAPTER II
LITERATURE REVIEW

This chapter reviews the existing literature related to the theoretical framework of vocabulary knowledge, followed by a description of the conceptual framework of vocabulary knowledge. Vocabulary teaching techniques through Facebook are also discussed. The study then reviews previous research on vocabulary knowledge learning and online social media (Facebook) in vocabulary teaching.

2.1 Conceptual framework of vocabulary knowledge

The nature of vocabulary knowledge has been explored extensively over the years (Cronbach, 1942; González-Fernández, & Schmitt, 2019; Nation, 1990, 2001; Nontasee & Sukying, 2021; Qian, 2002; Richards, 1976). Among these studies, the framework of word knowledge proposed by Nation (2001, 2013, 2022) is considered more influential in the domain of second language vocabulary studies. Nation (2001, 2013, 2022) states that knowing a word involves three main continuum aspects: form, meaning, and use, and all forms of vocabulary knowledge need both receptive and productive knowledge of understanding. These aspects of reception and production, classified in 18 elements as shown in Table 1, will then be clarified in detail.

The word form includes the spoken form, written form, and word parts knowledge. The spoken form of a word means the ability to recognize a vocabulary when it is pronounced and is referred to as receptive knowledge of the spoken form. Contrastingly, the ability to create it in a speech to express meaning is productive spoken form knowledge. Recognizing a word divided from other words might be difficult in speech since the words are run together and not separated by gaps. In addition, speech is usually only heard once, with a limited chance to go back and review the speech. Instead, listeners may rely on context and accurate prediction of meaning in streams of sounds that may have several possible interpretations (Brown & McNeill, 1966).

Receptive knowledge of the written form is the ability to recognize a word when it is encountered in reading, while productive knowledge is the ability to write a word correctly. Written word recognition refers to the power of the reader to recognize words accurately and quickly. Nation (2001, 2013, 2022) defined spelling as the process of converting sounds into graphemes. However, this may be difficult when more than one language is involved, and these languages do not share the same alphabet. Alternatively, when a new word is encountered, the learner must comprehend its meaning, including the context and morphology of the word.

Table 1 Aspects of vocabulary knowledge (Nation, 2001, 2013, 2022)

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 the 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 referents	R	What is included in this concept?
		P	What items can the concept refer to?
	Associations	R	What other words does this make people think of?
		P	What other words could people use instead of this one?
Use	Grammatical functions	R	In what patterns does the word occur?
		P	In what patterns must people use this word?
	Collocations	R	What words or types of words occur with this one?
		P	What words or types of words must people use with this one?
	Constraints on use	R	Where, when, and how often would people expect to meet this word?
		P	Where, when, and how often can people use this word?

* R = receptive knowledge, P = productive knowledge

The aspect of word parts is regarded as morphemes, and morphological knowledge is made up of numerous morphemes. In English, word parts are defined as affixes, including prefixes and suffixes (Nation, 2013, 2022). Affixes attached to a base form might add to the word's overall meaning. Although word parts knowledge is rarely

explicitly taught, language learners typically acquire word parts implicitly through grammatical knowledge. Recognizing word parts is receptive knowledge, and expressing a given meaning is productive knowledge. This knowledge might benefit learning vocabulary (Nation, 2013, 2022; Thornbury, 2002).

The word meaning includes the reception and production aspects of form-meaning links, conceptual referents, and word association knowledge. The aspect of form-meaning links knowledge consists of the recognition and production of a word. An early stage of learning a new word is understanding the relationship between word form and word meaning. Involving morphemes to convey semantic information, L2 learners create this link in part based on their morphological knowledge of the new word (Henderson, 1982). For example, before being able to construct a form of a word, students must first know its meaning (Laufer & Goldstein, 2004; Schmitt, 2000). Receptive knowledge would involve linking an L2 form to the concept and meaning, while productive knowledge would require a link in the other direction: the meaning or idea to its form in the L2.

Conceptual reference knowledge is also involved in the meaning of a word. Concepts and referents are knowledge and meaning networks that have been formed in L1 and do not need to be reformed and reconstructed for L2 knowledge. However, the creation of concepts and referents in L1 takes considerable time. Learners may not have entirely acquired this skill in L1 before attempting to add it in L2 (Nation, 2013, 2022). These words may share the same form and part of speech and are sometimes derived from different sources. Words that have the same form but have unrelated meanings are called homonyms (the same written and spoken forms), homographs (the same written form but different spoken form), and homophones (the same spoken form but different written form).

The last word meaning aspects are the reception and production ability of associated word knowledge (Nation, 2013, 2022). Word associations are the semantic relationships that occur among a large number of English words (Miller & Fellbaum, 1991). It is necessary to differentiate between speech parts to describe the word's organizational structure. Some conventional associations, such as opposites,

synonyms, and hyponyms, can be established through deliberating learning, but there is likely little value in teaching them (Webb, 2020). The most pervasive and vital relationship is synonymy, but nouns, adjectives, and verbs use preferred semantic relations and have their kind of organization.

Finally, the word use aspect, also known as the function of a word, includes the reception and production of the grammatical function knowledge, collocations knowledge, and constraints on use knowledge. The grammatical functions knowledge is frequently based on parallels between L2 and L1 and similarities in the grammatical role of words with related meanings. If the grammatical patterns in L1 and L2 are similar, the learning burden will be decreased. In parallel, if words with associated meanings, such as run and walk, follow similar patterns, the learning burden of one of these words will be lighter since prior knowledge of the other word will be a helpful guideline.

Word collocation is typically regarded as an aspect of "idiomatic" English. Some expressions produced by L2 or EFL learners may be described as "grammatical" but not necessarily as "idiomatic." Collocations represent two or more words that are typically used together. Such combinations sound "natural" to native English speakers and are judged "correct," whereas other combinations sound "unnatural" and are deemed "wrong." The collocated words are classified as lexical or grammatical dimensions. Lexical collocations are the combinations of two or more content words, such as nouns, verbs, adjectives, and adverbs; such as do business, make mistakes, heavy rain, look carefully, and definitely wrong. Grammatical collocations refer to as the associations of these words with a particular preposition, such as wake up, relate to, insist on, fascinated in, and happy with.

The constraints on use involve several factors that limit where and when specific words can be used (Nation, 2013, 2022). How the vocabulary is translated into the first language and the context in which the word is employed can both impose restrictions on its usage. In some languages, the words used to refer to people are severely constrained, particularly in indicating the speakers' relationship to the person

they refer to. Learners may anticipate this and be especially cautious in this aspect when using a second language (Henriksen, 2013).

The current study focuses on the written form knowledge of the participants due to their characteristics. Form knowledge encloses the ability to identify the phonological and morphological features of a word in both written and spoken modes. Meaning knowledge entails a learner having insight into form and meaning, concepts and referents, and word associations. Finally, use knowledge describes the places where each word can be used and the company the word is likely to keep; for example, if a word is an adjective, it will generally be followed by a noun, or it follows the verb to be. If it is a noun, it is then likely to be preceded by an article. Alternatively, some lexical items are likely to occur together, while others are not (e.g., be familiar with or similar to). Accordingly, a learner must understand the unique behavior of a particular word since its use may sometimes entail inappropriate grammatical functions. A thorough perception of a word necessitates comprehending all nine aspects of word knowledge, both receptively and productively.

Nonetheless, Nation (2013, 2022) points out that different word aspects are acquired in various stages and at different rates. For example, learners may gain knowledge of some word aspects, such as its spoken and written forms, before or after understanding its meaning. Learners may learn a single meaning in a context and gradually acquire other meanings. The word use aspect may be the most challenging knowledge to master because the learner must first need to complete different aspects of word knowledge (Nation, 2013, 2022; Schmitt, 2010). This kind of word knowledge, such as register, pragmatic constraints, and collocations, may demand basic information of lexical and grammatical knowledge. Henriksen (1999) also describes the incremental development of vocabulary knowledge that learners have knowledge of any word aspect, which ranges from zero to partial to precise; that is, all word knowledge aspects go on a continuum, rather than being known versus unknown. Indeed, a word can be learned in all types of degrees, from knowing that a given form is an existing word to fully mastering all aspects of a word (Laufer, 1998; Nation, 2013, 2022; Schmitt, 2010). The extent of such knowledge applies to all learners, including native (L1) speakers and second language (L2) learners (Laufer &

Goldstein, 2004). Therefore, the written form (both in receptive and productive knowledge) will be measured in the present study based on the consideration that represents the most accessible aspect of knowing a word to fit the proficiency of the study participants. Pellicer-Sanchez and Schmitt (2010) found that productive word class and meaning were learned after the receptive aspects of meaning and spelling. Conversely, Pigada and Schmitt (2006) found that the productive aspect of spelling was easier than the receptive aspect of grammatical knowledge. That is, word form knowledge is suggested to be learned by the primary level of learners. The following section will describe the definitions of receptive and productive vocabulary knowledge in relation to their operationalization.

2.2. The continuum of receptive and productive vocabulary learning

Some scholars indicate that knowing a word has been described as vocabulary knowledge as receptive and productive knowledge continuum (Laufer & Goldstein, 2004; Nation, 2001, 2013, 2022). Henriksen (1999) proposed that the receptive-productive knowledge continuum indicates the ability to acquire and then use vocabulary knowledge at different stages. Receptive and productive vocabulary knowledge is also known as passive and active vocabulary (Corson, 1995; Laufer, 1998; Laufer & Paribakht, 1998; Meara, 1990), recognition and recall (Schmitt, 2010), or comprehension and production (Melka, 1997). The term "passive" refers to listening and reading, and "active" refers to speaking and writing. They can be used interchangeably for receptive and productive knowledge. The terms' meaning recognition' and 'meaning recall' are additionally utilized for receptive knowledge, and 'form recognition' and 'form recall' are used for productive knowledge (Schmitt, 2010). Indeed, receptive vocabulary use entails perceiving a word's form while reading and retrieving its meaning. Productive vocabulary use entails intending to express meaning through speaking or writing and retrieving and producing the proper spoken and written word form. Therefore, there is a need to specify these terms and propose a generally agreed conceptualization of what ability of vocabulary use should be referred to by receptive and productive vocabulary knowledge (Melka, 1997; Schmitt, 2010). The distinction between comprehension and production is defined differently in different studies. The differentiation between receptive and productive

vocabulary knowledge is generally accepted by vocabulary researchers and is defined differently in additional studies.

The receptive aspect is defined as receiving input from others through listening or reading and trying to comprehend it. The productive element is producing language forms by speaking and writing to convey messages to others (Laufer & Goldstein, 2004; Nation, 2001, 2013, 2022). In most cases, the validity of the receptive versus productive differentiation is determined by the contrast between receptive skills such as listening and reading and productive skills such as speaking and writing (Crow, 1986). Alternatively, Laufer and Paribakht (1998) point out that one of the most important aspects of learning vocabulary is the interaction between receptive and productive vocabulary knowledge. Receptive vocabulary knowledge is used to understand a word, while productive vocabulary knowledge is used to produce a word (Henriksen, 1999; Zareva, Schwanenflugel, & Nikolova, 2005). Gairns and Redman (1986) define receptive vocabulary knowledge as language items that can be recognized and comprehended in the context of reading and listening information, and productive vocabulary knowledge as language items that learners can recall and use effectively in speech and writing. (Noori, Gholami, & Rajabi, 2014)

Nation (1990, 2013) clarifies that receptive knowledge is related to listening and reading activities that involve the awareness of the form and meaning of the word, while productive knowledge is related to speaking and writing in the context. More specifically, receptive and productive vocabulary knowledge concerning language use; as demonstrated, receptive vocabulary use involves perceiving the word form and retrieving the word meaning in listening or reading. And productive vocabulary use is the capability of retrieving and producing the appropriateness of a word's spoken and written form in expressing meaning in speaking or writing. The receptive and productive dimensions represent a continuum in vocabulary learning. Indeed, receptive and productive skills are interconnected; receptive skills can enhance productive use, while productive skills can be fostered in receptive skills (Corson, 1995; Nation, 2013, 2022). Learners do not enable to master all features of word knowledge simultaneously. Instead, learners acquire each aspect of word knowledge at different degrees at any time. Receptive learning and use precede before productive

learning and use. Productive learning is more difficult because new spoken or written output patterns must be mastered (Crow, 1986). Learners may only need to know a few distinctive features of the form of the item for receptive use. Productive use demands more accuracy in the form of vocabulary knowledge. Furthermore, productive knowledge encompasses all the knowledge required for receptive use (DeKeyser & Sokalski, 1996). There is evidence that receptive and productive learning requires particular practice (Laufer & Goldstein, 2004).

Henriksen (1999) distinguishes between receptive and productive vocabulary knowledge in measurement tasks, implying that receptive vocabulary is typically measured by recognition tasks such as multiple-choice tests. In contrast, productive vocabulary knowledge is regularly measured by retrieval tasks such as interviews, description, translation, or retelling. Melka (1997) attempted to define the distance between receptive and productive vocabulary knowledge from the mental lexicon perspective. The distinction between receptive and productive knowledge may be located in the information stored in the learners' mental lexicon. Some incomplete information about a word could evoke the receptive ability, yet incomplete information could not stimulate productive capacity. It implies that there may be a threshold along the receptive and productive vocabulary knowledge continuum and that receptive words may be translated to productive use when learners reach this barrier. Melka (1997) suggests that recognition is a critical stage reflecting receptive ability and might entail varying degrees of recognition. When the level of recognition reaches a specific degree, indicating mastery of receptive vocabulary knowledge, productive vocabulary knowledge occurs, resulting in successful retrieval of the word. Melka emphasized that the transition from receptive to productive vocabulary knowledge is not clear cut because when a feature of the word crosses over from receptive to productive use along the continuum, some other receptively known parts of the word are incomplete to activate the word for productive use. For example, even if the meaning of a newly acquired word, such as eliminate, has progressed to the productive use level, collocation knowledge, such as eliminate waste, may still be at the receptive stage.

On the other hand, Meara (1997, 2009) does not divide between receptive and productive vocabulary knowledge when vocabulary knowledge is viewed as a mental lexicon. Meara hypothesized that a word is ready to be activated for productive use because one or more of the linkages to this word facilitate retrieving the word. Meara's hypothesis helps explain a circumstance in which a person may experience a tip-of-the-tongue condition while searching for a word but failing to retrieve it. However, the word may suddenly come to mind later due to a certain context activating it. Meara (1990) hypothesized that words regarded receptively acquired could be triggered by external stimulation, while internal stimuli can only activate words available for productive use. According to Meara's (1990) proposal, a target word comes to mind due to the context stimulating specific receptively acquired words that relate to this target word, making it available for productive use. Conversely, the tip-of-the-tongue state might be induced by a lack of connection between the target word and certain other receptive words prompted by the context at the time. Meara suggests that only an internal relationship exists between receptively acquired words and the target word activated for productive use. Meara (1990, 1997, 2009) identified the differences between receptive and productive vocabulary knowledge as the number of connections the target word has with other words. The more links a target term has to other words, the more likely and easily it will be transferred for productive use. Meara's assumption explains not only why a word is sometimes ready for productive use in some contexts and sometimes not in others but also why some learners require minimal features of a word to master it productively while some others may require more knowledge about the word to generate it.

Meara and his colleagues' mental lexicon viewpoint on vocabulary knowledge (Meara & Wolter, 2004; Meara, 1997, 2007, 2009; Wilks & Meara, 2002) used a simple concept of word connections to represent a complicated construct of vocabulary knowledge. Language learners' and users' word association behavior may reveal a number of valuable information about what they know about words. Meara (2009) conceded that it is difficult to "exploit this richness" that the word association can generate. Zareva (2005) acknowledged this difficulty and proposed that the association measures "need to be re-examined in an assessment context" if their

potential to be uncovered and employed as valid instruments to represent learners' complex vocabulary knowledge is to be realized. Furthermore, Webb (2008a, 2008b) proposed that "knowing students' receptive vocabulary size gives teachers an indication of whether those students will be able to comprehend a text or a listening task, whereas knowing their productive vocabulary size gives some indication of the degree to which students will be able to speak or write." Jiang (2000) differentiated the definition between receptive and productive vocabulary knowledge concerning L2 vocabulary acquisition, indicating semantic transfer and growth in L2 vocabulary acquisition. From this viewpoint, receptive vocabulary knowledge for L2 learners is the recognition of a word's form and linking it to the equivalent L1 translation. In contrast, productive vocabulary knowledge for L2 learners is the retrieval of the L2 word form based on conceptual or semantic comprehension in the L1. Specifically, if L1 and L2 are similar, the error rate in the receptive and productive use of the L2 word will be diminished (Jiang, 2000, 2004a, 2004b). Therefore, translation from L1 to L2 and L2 to L1 defines receptive and productive vocabulary knowledge (Waring, 1997a, Webb, 2009).

To sum up, receptive vocabulary knowledge is defined as the ability to recognize the word form (Laufer & Goldstein, 2004; Nation, 2013; Mochida & Harrington, 2006), perceive the word meaning (Webb, 2008a), and provide the word synonym or translation in a learner's first language (Waring, 1997b; Webb, 2009). In contrast, productive vocabulary knowledge is the ability to retrieve the word form and meaning (Laufer & Goldstein, 2004; Webb, 2008a) or produce the word according to its L1 equivalent (Waring, 1997b; Webb, 2009). Restriction: All of the definitions of receptive and productive vocabulary knowledge discussed herein constrain receptive and productive vocabulary knowledge in the word aspects of form and meaning (Zhong, 2014, 2018). Thus, the present study defines receptive vocabulary knowledge as the ability to recognize and know a word, at least to some extent, and productive vocabulary knowledge as the ability to recall, retrieve, and use it in context. The following section will describe the underlined theories in vocabulary learning and the role of vocabulary in language learning.

2.3 The roles of vocabulary in language learning

Vocabulary serves as the basic building block of a language. This statement holds true for L2 learning as well. Vocabulary knowledge, over syntactic knowledge, is more capable of helping an L2 learner make meaning out of context. As such, the importance of vocabulary instruction should precede that of grammar instruction in the process of learning L2. Vocabulary knowledge could be presented to students in multiple ways. Such as putting the vocabulary into authentic language using tasks, introducing vocabulary through interactive contexts to deliver the chances of noticing the target words, and utilizing technology and multimedia tools to assist learning. In the meantime, students' L1 could be used as a resource for L2 vocabulary learning because of the possible existence of cognates. Here is to present the different theories or concepts underlined in vocabulary acquisition and learning.

First, the information processing theory is a theoretical framework based on the idea that humans actively process the information they receive from their senses (e. g., hearing and seeing). Learning occurs when the brain receives information, records it, molds it, and stores it. According to information processing theory, language skills are learned in three stages: input, processing, and output. Input involves any representative samples of the target language that learners come across. Indeed, Schmidt (2001) suggests that learners must first pay attention to any aspects of the language they are trying to learn or produce. More precisely, the input can be anything that uses up the learner's mental processing space and can contribute to learning, even if the learner is unaware of it or attending to it intentionally. Therefore, learners initially tend to use most of their resources to understand the main words in a message. This frees up cognitive processing resources to notice other aspects of the language that, in turn, gradually become automatic. Information processing approaches to second language acquisition (SLA) have been studied by many researchers (Anderson, 1995; DeKeyser, 2007; Lightbown & Spada, 2013). Research suggests that most learning starts with declarative knowledge, that is, the knowledge they are aware of. The hypothesis is that, through practice, declarative knowledge may become procedural knowledge or the ability to use the knowledge. With

continued practice, procedural knowledge can become automatized, and the learner may forget having learned it first as declarative knowledge.

Next, Craik and Lockhart's (1972) levels (depth) of processing indicates that the way information is encoded affects how well it is remembered. The deeper the level of processing, the easier the information is to recall. Hulstijn and Laufer (2001) also suggested that engagement (involvement) for vocabulary acquisition incorporates three elements: need, search, and evaluation. 'Need' is the intrinsic motivation for learners to know some aspects of a particular word to better understand a reading passage. 'Search' is conceptualized as an attempt to find the required information, i.e., looking up the form-meaning link of the word or relevant information in a dictionary. 'Evaluation' involves retrieval of the lexical item's meaning or other related information, with the context of use, to see if it fits or is the best choice.

Indeed, the noticing hypothesis has its roots in two case studies by Richard Schmidt. In the first study, he found that Wes - a U.S. immigrant from Japan, was an outstanding learner in every area of language except for limited development in morphological or syntactic accuracy. Therefore, Schmidt concluded that in the case of adults learning grammar, it is most likely impossible to understand without consciousness (Schmidt, 2010). He also showed evidence from his second case study to support the noticing hypothesis about his experience learning Portuguese during his five-month stay in Brazil. Although he and Frota found some frequently used forms in the input, the acquisition started only when they consciously noticed these forms in the input (Schmidt & Frota, 1986, Schmidt, 2010). He added despite being corrected many times during the conversations with native speakers, without consciousness, corrective feedback of his mistakes was ineffective. This refers to another hypothesis that Schmidt called "noticing the gap." Through this case, he proposed that learners must consciously compare their target language input and output to avoid errors. Based on the findings in these two case studies, Schmidt concludes that "intake is what learners consciously notice" (Schmidt, 1990, p.149).

In conclusion, it is crucial to conduct a language classroom by presenting vocabulary knowledge to students in multiple ways. Introducing vocabulary provides the use of

seen or observed things, including images and the transfer of information through listening, including voices to deliver the chances of noticing the target words, and combining technology and multimedia tools to assist learning could help assist in L2 acquisition. Thus, the following section will present different types of L2 vocabulary learning both incidentally and deliberately in order for the teachers to appropriately employ them in particular contexts of language classrooms.

2.4 Teaching Vocabulary

Vocabulary learning needs serious attention from both learners and teachers. It becomes a great challenge for the teachers to teach vocabulary, what kind of methods they use, what kind of vocabulary they teach, or how many words they should teach. The first step when teaching vocabulary is to decide whether the word is worth spending time on or not. If the word is a low-frequency, useless technical, and impractical word for the learners, it should be taught quickly. The teacher should spend time on high-frequency and practical words with learners to build their word bank for further use. This section provides detailed descriptions of different teaching methods/techniques, focusing on deliberate and incidental vocabulary learning.

2.4.1 Incidental vocabulary learning

Incidental learning is the learning of one stimulus context while concentrating on another stimulus context. It can be observations, communications with colleagues about tasks or projects, experiencing mistakes, or reading things. Moreover, it is general for learners to acquire vocabulary stock (Laufer & Hulstijn, 2001). Hulstijn and Laufer (2001) mention that the wordlist that the readers meet in incidental vocabulary learning would be retained in the long-term memory and used more confidently in different situations; however, only incidental learning works well on advanced level learners. Although incidental vocabulary learning seems to be effective for L2 learners, there are some limitations due to time-consuming because incidental learning is slow (Schmitt, 2000: 120). Learners with academic goals may not be suitable for this form of vocabulary learning (Coady, 1997: 273); therefore, intentional vocabulary learning is required to compensate for these limitations. Nation (2001) adds that incidental learning is a principal strategy in vocabulary learning. It occurs without a specific intention to focus on vocabulary. Nation (2001) concludes

that incidental vocabulary learning is one form of learning from listening, speaking, reading, or writing while focusing on the information of the text, not the vocabulary itself.

To conclude, incidental learning is the learning form in which learners concentrate on the context, not the vocabulary itself. The readers may meet the words in listening, reading, listening, or writing would be retained in the long-term memory. However, incidental learning has the limitation that it works well on advanced learners; therefore, it may not be practical to use incidental learning for primary school students.

2.4.2 Deliberate vocabulary learning

Deliberate or intentional vocabulary learning is a conventional and common form of teaching vocabulary (Ellis, 2001: 1-46). Schmitt (2000: 120) defines it as explicit vocabulary learning requiring direct attention and contact with the context learned. Deliberate learning is paying intention to learn lexical items, and learners must apply retention strategies to recall these words later (Schmidt, 1984; Hulstijn, 2003; Nation, 2013, 2022). Intentional learning is fast; thus, it is preferred by L2 learners; nevertheless, the problem arises when learners come across low-frequency words and cannot comprehend them correctly. Although Nation (2001: 232) claims that vocabulary is learned incidentally, he insists that intentional learning is required for vocabulary learning too. Schmitt (2000: 121) supports this claim that both intentional and incidental learning is necessary and should be taught. Eventually, deliberate learning can be defined as the form of learning vocabulary by using some media or tools to draw learners' attention into direct contact with the form and meaning of the words; those tools can be a dictionary or vocabulary lists.

According to Nation (2013, 2022), the quality of vocabulary learning is conditional on the amount of learner involvement while processing individual words. He further explained three cognitive processes that lead to learning a word: noticing through deliberate instruction, retrieval, and creative (generative) use as shown in Table 2

Table 2 Types of repetition of word meaning (Nation, 2013: p.457)

Type of processing	Type of repetition
Noticing	Seeing the same word form and simultaneously presented meaning again
Retrieval	Recalling the meaning in different contexts requiring
Creative use	Recalling the meaning in different contexts requires a separate instantiation of the meaning

The noticing process involves a learner's attention to the given word and marks it as an unknown. This means the learner needs to notice the word and be aware of it as a valuable lexical item. However, the learner realizes that the word has been met before but is used differently. Besides, the learner will tend to decontextualize the word the moment they notice it, which, in turn, will provide the foundation for a better understanding of the word. To reach that goal of noticing process, consciousness-raising activities are needed. According to Willis and Willis (1996), consciousness-raising activities work as a guideline which encourages the learners to think about samples of language and encourages them to draw their own conclusions about how the language works and they can appear based on spoken or written texts in the forms of conversation or story. To make the characteristics of consciousness-raising activities clearer, Ellis (2002) indicates that consciousness-raising activities are only administered at explicit knowledge, without expectation that learners use in communicative output a particular feature that has been brought to their attention through formal instruction. By the way, Ellis (2002) suggests that consciousness-raising activities may be suitable for advanced learners. Apart from the noticing hypothesis, the task-induced involvement construct grounded in the depth of processing theory (Craik & Lockhart, 1972) may need to be taken into consideration. Researchers have paid particular attention to traditional components of effective tasks, such as noticing, attention, elaboration, and motivation. Laufer and Hulstijn (2001) presented the involvement load hypothesis as a new formula for vocabulary instruction, wherein the effective acquisition of new words depends on the mental effort (involvement) learners devote to processing new words. They proposed a motivational-cognitive construct of involvement, which consists of three components, namely need, search, and evaluation. These three components, which can be quantified, can be applied in predicting word learning and retention. Specifically,

need is the motivational, non-cognitive dimension of involvement. Need is considered to be moderate if the learning is task-imposed, and strong if learner-imposed (i.e. when learners are intrinsically motivated to communicate a concept for which they lack a word). The two components, i.e. search, and evaluation, are cognitive dimensions of involvement. The focus is on how learners process information and memorize word form and meaning. Search indicates that learners can use resources to determine the meaning of unknown words during a task; search is absent when such effort is not required.

Deliberate vocabulary learning outperformed the incidental group on vocabulary tests (Tabrizi & Feiz, 2016). Nation (2013, 2022) illustrates in his book that repetition is crucial for vocabulary learning. In learning a second language, learners must frequently be exposed to the words or have spaced repetition with the words. Moreover, Elgort (2011) and Karami & Bowles (2019) argued that deliberate vocabulary learning is more effective than incidental learning because the latter often requires long-term and extensive exposure to linguistic input. Besides, natural language learning conditions are uncommon in English as a foreign language (EFL) or other foreign language learning contexts. By contrast, deliberate learning of vocabulary enhances learners' vocabulary development process. This is due to the focused repetition or memorization strategies, which can be completed individually in a short period of time. Arguably, deliberate vocabulary learning retention rates are generally higher than those obtained with incidental learning (Hustijn, 2003), showing that deliberate attempts to learn vocabulary are effective and worth the effort. The research concludes that the direct and intentional learning method is a more effective way to learn and retain new words for L2 learners (Nation & Meara, 2010).

To sum up, deliberate learning is a direct learning method in which the learners must pay attention to learning the targeted words. Repetition is the primary strategy that makes this learning effective: noticing the words, retrieving, or recalling them regularly, and using them in different contexts.

2.4.2.1 Deliberate form-focused instructions

Krashen (1989) argued that linguistic knowledge is acquired only when the learner's attention is focused on the message (not form) — for example, when reading or listening for meaning—and that only acquired knowledge is involved in authentic language use. Deliberate form-focused learning, on the other hand, according to Krashen, results in so-called learned knowledge, which can only be used to monitor performance under certain conditions (e.g., when there is no time pressure). However, it has been argued that naturalistic usage-based learning is insufficient to acquire second-language (L2) vocabulary (Cobb & Horst, 2004; Ellis, 2008; Laufer, 2005). And it needs to be supplemented by deliberate form-focused learning (Elgort & Nation, 2010; Hulstijn, 2003; Nation, 2007) and by metalinguistic teaching approaches, including those based on contrastive analysis (Jiang, 2004).

Deliberate learning (DL) provides an efficient and convenient way of memorizing vocabulary. Learning from word lists, flashcards, and other audio-visual aids can be done outside the language classroom, and target vocabulary can be personalized to individual learners' needs and learning goals. Nation (1980) showed that people could retain between 30 and 100 new words per hour from bilingual word pairs. Furthermore, on average, retention rates under intentional learning are much higher than under incidental conditions (Hulstijn, 2003). However, the snag is that it cannot be automatically assumed that the quality of vocabulary knowledge gained through deliberate decontextualized learning is at the level that is needed for actual language use (which brings us back to the learning/acquisition point made by Krashen, 1989).

A body of research in vocabulary acquisition also emphasized the efficacy of deliberate vocabulary teaching (Bubchaiya & Sukying, 2022; Elgort & Nation, 2010; Hulstijn, 2003; Nation, 2007; Magnussen & Sukying, 2021; Yowaboot & Sukying, 2022). To begin, Magnussen & Sukying (2021) examined whether deliberate learning activities using songs and total physical response (TPR) can facilitate preschoolers' vocabulary acquisition in a Thai EFL context. The findings revealed that singing and TPR and the mix of both methods significantly improved the participants' vocabulary acquisition, with the TPR&S method having a more positive impact on the participants' vocabulary acquisition than either singing or TPR alone. This indicated

that singing and TPR, deliberate vocabulary learning, are effective to teach young learners English vocabulary in EFL contexts. It is also in line with Yowaboot & Sukying (2022), who investigated whether the use of digital flashcards, which is deliberate vocabulary teaching, could improve English vocabulary knowledge of the form-meaning link in Thai primary school children in an EFL context. The experimental participants were taught using digital flashcards, while the control group was conducted using the conventional method. The students in the experimental group performed significantly better than those in the control group. These results indicated that digital flashcards, the deliberate vocabulary methods, effectively facilitated vocabulary learning. Correspondingly, Bubchaiya & Sukying (2022) confirmed the effectiveness of deliberate vocabulary learning. They investigated the effects of the word parts strategy instruction on vocabulary knowledge among primary school students in a Thai EFL context. 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 comprised 25 students. The results showed that the students in the experimental participants with word part strategy instruction outperformed those in the control group. Thus, it is clear that deliberate vocabulary learning is crucial for EFL learners to acquire new vocabulary. It is suggested that teachers wisely choose activities regarding deliberate learning to teach L2 vocabulary depending on many factors such as; proficiency level, learning context, learners' readiness, and so on.

In summary, deliberate vocabulary learning is essential for young L2 learners and helps learners master certain aspects of a word before encountering the other aspects. Selecting words suitable for the learners' proficiency levels, materials and tasks would be highly recommended for ultimate practice. It is also suggested that the instructors provide the opportunity for young L2 learners to form-focused instructions to acquire more lexical knowledge essential for further word learning.

2.4.2.2 Consciousness-raising activities for vocabulary learning (written form)

One aspect of gaining familiarity with the written form of words is spelling. As Brown and Ellis (1994) point out in the introduction to their excellent collection of articles about spelling, this has been a growth area for research. What is striking about

the research on spelling is how it reflects the issues involved in other aspects of vocabulary and language knowledge. A comparison of the spelling of English speakers with speakers of other languages shows that the irregularity in the English spelling system creates difficulty for learners of English as a first language (Moseley, 1994). Poor spelling can affect learners' writing by using strategies to hide their poor spelling. These include using limited vocabulary favoring regularly spelled words, and avoiding words that are hard to spell. Although there is no strong relationship between spelling and intelligence, readers may interpret poor spelling as a sign of a lack of knowledge.

The ability to spell is most strongly influenced by the way learners represent the phonological structure of the language. Studies of native speakers of English have shown strong effects on spelling from training in categorizing words according to their sounds and matching these two letters and combinations of letters (Bradley and Huxford, 1994). The training is one of the studies that involved 40 ten-minute training sessions, but the positive effects persisted for years. Early training helps create a system that improves later learning and storage. Playing with rhymes can help in this awareness of phonological units and is an effective categorization activity. Thus, it is suggested that training by using a list of categorizing words sharing the same sound could help learners form the letters into words.

Learners can represent the spoken forms of words in their memory in various ways – as whole words, as onsets (the initial letter or letters) and rimes (the final part of a syllable), as letter names, and as phonemes. One way of representing a spelling model is to see it as consisting of two routes: one accesses stored representations of whole words and the other constructs written forms from sound-spelling correspondences. It is considered that this model is too simplistic and that the two routes influence each other, and the choice of ways depends on the type of processing demand. The learning burden of the written form of words can also be affected by first and second-language parallels (does the first language use the same writing system as the second language?), the regularity of the second language writing system, and the learners' knowledge of the spoken form of the second language vocabulary.

Vocabulary activities are classified according to the various aspects involved in knowing a word. Rich instruction would include giving attention to several aspects of the same word. Below are descriptions and examples for each of the activities focused on the form knowledge of vocabulary in Table 3. Each aspect is the learning goal of the activity. Some of the activities could be classified under several aspects of what is involved in knowing a word. Although English has irregularities in its spelling system, there are patterns and rules which can guide learning (Nation, 2009). Some learners may require particular attention to writing the letter shapes if their first language uses a different writing system from English. The present study applies Dictating Words, where learners write words and sentences that the teacher dictates. This can be easily marked if one learner writes on the blackboard. The teacher corrects this, and the other learners use it to correct their work or their partner's work. Finding spelling rules, which allows learners to work with a list of words to see if they can find spelling rules, is also applied.

Table 3 Nation's range of form-focused activities

	spoken form	Pronouncing the words
		Developing phonological awareness
		Reading aloud
Form	written form	Dictating words and sentences
		Finding spelling rules
	word parts	Filling word part tables
		Cutting up complex words
		Building complex words
		Choosing a correct form/ finding etymology

2.5 Facebook, online social media (platforms) for vocabulary learning

In recent years, social networks have been widely accepted as efficient platforms for scholarly communications. According to Blattner & Fiori (2009, p. 20), Facebook is

the largest social network boasting more than 100 million members, and is one of the fastest-growing and best-known sites on the internet.

Although early Facebook appeared, the main reason for students to use Facebook was to keep in contact with friends (Ellison, Steinfield, & Lampe, 2007) . Wodzicki, Schwammlein & Moskaluik (2012) later discovered that students would favor exchanging informal experiences if a collaborative and sharing environment is embedded in Facebook. Roblyer et al. (2010) found that students prefer communicating with teachers via Facebook compared to traditional face-to-face interaction, which may reduce immediate embarrassment and remain a comfortable environment.

Mazman & Usluel (2010) recognize Facebook has three types of educational functions: communication, collaboration, and resource/ material sharing. Communication consists of activities such as enabling communication among students and their instructors, facilitating class discussions, delivery of homework and assignments by teachers, informing about resources related to the course; consist of activities such as people's joining academic groups about their schools, departments, or classes and carrying on group works by sharing homework, projects, comments, and ideas; collaboration consists of activities such as exchanging multimedia resources, videos, audio materials, animated videos, resources, and documents. As students become increasingly connected through social networking sites such as Facebook, we may need to utilize them specifically in the language classroom.

As a communicative tool in the language classroom, Facebook can promote collaboration through target language discussions, status updates with images or videos involved, comments, and questions. Students can discuss a photograph or video or can facilitate an activity in which they describe in a foreign language a particular place, person, exercise, etc. , and other students try to guess what it is. Instructors can also create hypothetical events in the target language country and design a discussion around the students' anticipation before, experiences, and thoughts after attending the event. These collaborations can promote a sense of connection and community between the students allowing for a richer and more engaging learning

experience. In this manner, Facebook allows for multi-dimensional conversation, both among students and between students and the instructor (Terantino & Graf, 2011).

To acquire vocabulary via the use of Facebook, the instructor may need to provide deliberate or intentional vocabulary learning sources in order to allow the learners to get exposure to the target words. In incidental vocabulary learning, word learning is not planned to be the primary activity (Huckin & Coady, 1999; Sok, 2014). Thus, deliberately learning vocabulary means that such activities will be conducted with an intentional purpose. The vocabulary activities created for a specific purpose performed via Facebook can serve as a platform to acquire vocabulary deliberately. Posting educational sources via the Facebook closed group; texts, images, and videos, and having the learners see, hear, and type following various instructions given considers deliberate vocabulary learning. This could lead to success in learning vocabulary through Facebook since it is claimed that deliberate language learning has a higher potential than incidental language learning (Ahmad, 2012).

2.5.1 Advantages of using Facebook groups in language learning

Terantino & Graf (2011) reveal several perceived benefits to integrating Facebook in language courses. First, using Facebook seems to have a significant impact on language learning. It allows students to engage with peers in a familiar format and for an academic purpose. More importantly, foreign language courses provide opportunities for informal conversations in the target language. In addition, the Facebook platform allows for access to authentic materials and the sharing of culturally relevant photos, videos, and music. These features appear to promote social and active language learning. Second, the nature of the student-to-student and student-to-instructor interactions is more multi-dimensional than traditional assignments. For example, the conventional assignment is often accompanied by one-time feedback and assessment from the instructor. In the Facebook environment, feedback can be delivered more dynamically. It can be more easily given and can be done so immediately. In addition, this type of more informal feedback often comes from both the instructor and other students, further promoting the sense of collaboration that accompanies the social media environment. Third, on a more personal note, in our teaching experience (at various levels of education), we have never encountered such

genuine excitement on behalf of the students when participating in an activity using the target language. We could not have predicted the sheer amount of linguistic production from the students, especially that which emerged outside the formal assignments.

2.5.2 Challenges of using Facebook groups in language learning

Though teaching and learning English through Facebook seems advanced and interesting, it also has its own drawbacks. Teaching the English language through Facebook or Facebook groups is a costly affair and not all institutions can afford it. On the part of the students, there are chances they take things for granted. The students may also get distracted by other wide entertaining features. In spite of all these disadvantages, teaching the English language through Facebook will have an overwhelming response from students. Students can take part in follow-up activities and explore the issues of social networking. Facebook can be used either as a communication tool or as an educational tool. It depends on how one makes the best use of online resources.

Regarding integrating the Facebook group into teaching, a problem with time management and self-discipline needs to be addressed. Selwyn (2007) has mentioned that besides security problems, students use Facebook to 'hang out' widely. In addition, students waste a lot of time learning about their friends to improve their relationships on Facebook. Furthermore, Kabilan et al. (2010, p. 182) had also written similar ideas on the challenges of the online environment for learning English. Some of the negative impacts mentioned were wasting or overspending time, promoting negative attitudes among students, and, last but not least, affecting students' development destructively.

2.6 Vocabulary Knowledge Measurement

Measuring vocabulary knowledge is essential for assessing and evaluating learners' language proficiency in terms of word knowledge and, also, for teaching and learning a second language (Anderson & Freebody, 1981; Nation, 2013, 2022; Palmberg, 1987; Staehr, 2008; Vermeer, 2001). There are various measures designed to capture learners' vocabulary knowledge, and various researchers have advocated for different

tests based on their view of vocabulary knowledge (Laufer & Goldstein, 2004; Laufer & Paribakht, 1998; Read, 2000; Schmitt, Nation, & Kremmel, 2019; Webb, 2013). Some measures attempt to measure multiple aspects of knowledge simultaneously (Read, 1988; Schmitt, 1999), while others seek to assess learners' progress along a knowledge continuum (Wesche & Paribakht, 1996).

Word knowledge can be separated into receptive and productive knowledge (Read, 2000). Receptive knowledge, also known as recognition, refers to recognizing and comprehending words. In contrast, productive knowledge, also known as recall, refers to the ability to retrieve and produce words. Reception and production of vocabulary knowledge are typically separated from comprehension and use. In particular, comprehension relates to how well students grasp the target words in the test context, such as reading comprehension, while use refers to students' recall of vocabulary knowledge.

Vocabulary learning is incremental, and mastery of different aspects of a word tends to vary on a continuum stretching from 'no knowledge' at one end to 'full knowledge' at the other (Wesche & Paribakht, 1996). This continuum affects test design and items, and tests must be designed to suit their purposes. For example, if the test's purpose is to provide an overall picture of learners' vocabulary size and give credit for partial knowledge, a test of breadth of lexical knowledge is required (Cameron, 2002). On the other hand, if the purpose is to determine if learners have gained 'full knowledge' of the word, a test to elicit such knowledge needs to be developed. Most vocabulary tests purposely measure one aspect of word knowledge (e.g., knowing word meaning, form, or use). Yet, from the viewpoint of a receptive and productive continuum, earlier studies seem to capture aspects of either receptive or productive knowledge (e.g., Harrington & Carey, 2009; Hilton, 2008; Laufer & Goldstein, 2004; Laufer & Paribakht, 1998; Nation, 2006; Schmitt & Meara, 1997; Sukying, 2017; Yu, 2010). Thus, the present study will use various tests to measure a particular aspect of vocabulary knowledge: the written form of word knowledge. Each element will assess both reception and production.

2.7 Previous Studies

Social media plays a pedagogically important role in enhancing L2 vocabulary knowledge (Sim & Pop, 2014; Kabilan & Zahar, 2016; Al-Tamimi et al., 2018; Salazar, 2019; Rou et al., 2019). Many studies in recent years investigated the role of social media in L2 vocabulary acquisition in many aspects. For instance, Sim & Pop (2014) examined the use of Facebook as a platform to get 70 university learners exposed to the English vocabulary provided. They compared the group exposed to Facebook posts to the group taught using the conventional method (e.g., translation) to see if the treatment group outperformed the control one. The result showed that both groups performed better after the experiment. It is suggested that using social media as a learning tool for vocabulary enrichment is an excellent choice. Likewise, Kabilan & Zahar (2016) studied whether the use of Facebook as an environment of learning enhanced learners' L2 vocabulary. Thirty-three college learners have been exposed to the course module of English via the Facebook environment. The results showed that the participants gained significant vocabulary knowledge after administering the treatment. Similarly, Al-Tamimi et al. (2018) found that using Facebook combined with the developed instructional program on improving university students' writing skills and vocabulary enrichment had a positive effect.

Salazar (2019) analyzed the incidence of closed Facebook communities integrated with Flipped classroom method as a pedagogical approach for 40 eighth-grade learners' vocabulary development. A positive incidence of the experiment was found since they performed better in a posttest session. Moreover, Rou et al. (2019) explored the influence of social media on spelling skills among primary school learners by employing a survey. It is indicated that they learned new words from texts and other information via Facebook. However, these studies applied social media, especially Facebook, as a platform of instruction with different pedagogical techniques due to the proficiency of the particular participants and other additional factors. Rare empirical studies used Facebook as an instructional platform to promote vocabulary knowledge among EFL primary school-level learners. Most of the participants are in high school and above. A few studies mainly looked into different components of word knowledge (e.g., form and use). These findings indicated the lack of empirical

studies to support using Facebook integrated with a particular learning technique to develop some components of word knowledge in primary school-level learners using different measurements. Further studies should look into applying Facebook or social media as instruction platforms for primary school learners to enhance various aspects of word knowledge depending on learners' proficiency level.

Several studies have shown that Facebook is an important social platform for learning the English language in Thai contexts (Boontham, 2017; Endoo, 2015; Ulla & Perales, 2021; Wongsriwiwat, 2022; Yenjai et al., 2021). For instance, Wongsriwiwat (2022) found a relationship between the Thai EFL tertiary learners' frequency of social media (e.g., Facebook, Instagram) use in daily life and the amount of English vocabulary they have learned. The findings also showed that the students' frequency of social media use in everyday life positively correlates with the amount of English vocabulary they have learned. These findings suggested that getting learners exposed to the target language through social media was crucial in language acquisition. Another study by Endoo (2015) using questionnaires as the research instrument found that 92.5 % of the participants were very confident and believed that Facebook could increase new English vocabulary. Likewise, Boontham (2017) explored ways of using Facebook to develop the English skills of Thai non-English major students and found that the students need better English skills to use Facebook faster to keep up to date with the news. Together, these studies indicated the benefits of Facebook in language learning (Boontham, 2017; Endoo, 2015; Wongsriwiwat, 2022).

Recently, Ulla & Perales (2021) explored using a closed-class Facebook group as learning support from the perspectives and experiences of 33 university English language students in Thailand using a questionnaire and interviewing. The study showed that Facebook provided learners with an easy way to connect with their classmates, who could support them in their remote language learning. Later, Yenjai et al. (2021) examined Thai EFL tertiary learners' perception of utilizing Facebook Community technology to enhance business vocabulary by evaluating the data from questionnaires and semi-structured interviews. The participants reported that the Facebook community was beneficial in business vocabulary learning in terms of the ease of access, convenience, and information retrieval to employ in their daily life,

improving pronunciation and listening skills. Their study also pointed out that vocabulary pronunciation audio posted on Facebook was an appropriate method of vocabulary enhancement. Indeed, various Facebook features were useful pedagogical techniques for language learning. Based on the literature review, it can be argued that Facebook is not only perceived as a social network by the students but also as a learning platform where they can easily retrieve academic sources and share them with their classmates for intellectual discussion. In short, Facebook can be used as an alternative platform for language learning, especially during the Covid-19 pandemic.

To fullfill the gaps, Facebook was applied as an instructional platform that the teacher and learners use to learn vocabulary by paying attention to the content provided and producing the spelling to young learners. The learners encountered the target words every time they interacted with the content in the Facebook closed group as a treatment after the pretest was administered. The contents in the group were primarily about spelling rules and were delivered in the form of images, texts, and sounds, for the learners to notice and master the written form of the target words appropriately.

2.8 Summary of the chapter

Vocabulary is one of the most crucial aspects in any language, especially English, of all four skills: listening, speaking, reading, and writing. Vocabulary knowledge consists of three main areas: form, meaning, and use, in two methods: receptive and productive. This study uses deliberate vocabulary learning to achieve this level of word knowledge because intentional vocabulary learning significantly outperforms the incidental group on vocabulary tests with more frequent exposure to the language. Nation (2013) and a more effective way to learn and retain new words for L2 learners (Nation & Meara, 2010). Many studies suggested that Facebook can deliver the instructional sides of teaching and learning the language (Sim & Pop, 2014; Kabilan & Zahar, 2016; Al-Tamimi et al., 2018; Salazar, 2019; Rou et al., 2019). Social media platforms allow learners to interact using the target language in various ways. Written texts can be used via Facebook to be noticed, and other visual aids like images and sounds. Using images with texts strongly associated with the words, while video clips with texts could motivate them to learn vocabulary in real-life settings. Thus, integrating the Facebook features with language instruction may help learners master

vocabulary knowledge. The findings showed that the students' frequency of social media use in daily life positively correlates with the amount of English vocabulary they have learned. Besides, positive correlations were found between the students' employment of the English vocabulary learning process when they used social media in daily life and the amount of English vocabulary they have learned.
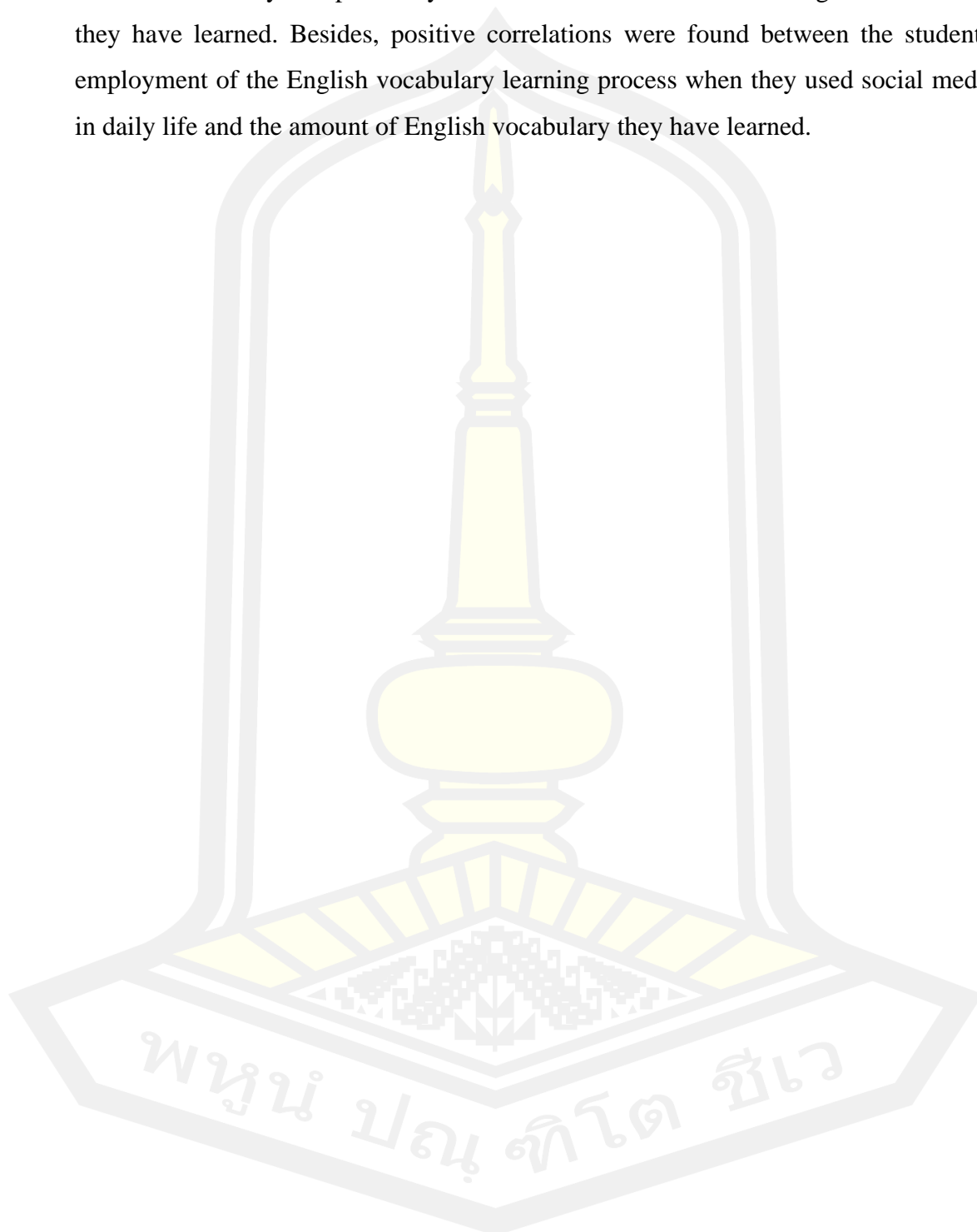
CHAPTER III
RESEARCH METHODOLOGY

This chapter presents the methodology of the current study. First, the research design and paradigm adopted in the study are discussed. This follows by a description of the participants involved in the study and justifications for the choice of such cohorts of participants. Next, the research instruments, data collection procedures, and analysis are discussed. Finally, the chapter ends with a summary of the current chapter.

3.1 Research design

This current study applied a mixed-method research approach. Mixed methods research is the combination and integration of qualitative and quantitative methods in the same study. The overall purpose and central premise of mixed methods studies are that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems and complex phenomena than either approach alone (Creswell & Plano Clark, 2007). This one-group pretest-posttest research design, for quantitative design, examined primary school students' receptive and productive vocabulary knowledge by using a Facebook group as an instructional platform and infusing deliberate vocabulary activities. A focus group was used to qualitatively explore learners' perceptions of using deliberate vocabulary activities via the Facebook group in order to investigate the qualitative data to describe the phenomenon of using the intervention with the participants. It could be said that the current research emphasizes qualitative more due to a small number of participants ($N = 24$).

3.2 Participants and setting

The population was Thai EFL primary school learners from an intact class from a small-sized school in northeastern Thailand. The study participants were selected by the convenience sampling method since the experiment was designed for the participants in this level. The participants were selected from the school where the researcher works in order to conduct the study and gain the data conveniently. Their ages ranged from 11 to 12 meaning that they were in grades 5-6, and 14 participants are females (n=14). The rest were male participants (n=10). All participants learned

English as a foreign language (EFL) and received English lessons for at least two years of systematic schooling. They learned English for about four hours a week. Still, their English was inadequate because the time given to English class is not quite enough. Most participants knew only the English alphabet but do not know how to read or write due to the lack of vocabulary knowledge. Most students live with their grandparents because their parents work in different provinces due to socioeconomic issues. All participants have their own devices used to communicate through online platforms. After they take the vocabulary size test developed by Wan-a-rom (2010), which was the vocabulary-size test designed to give an estimate of vocabulary size for second and foreign-language learners of English, the participants' English proficiency level is around A1 level or below based on the CEFR, meaning that learners have basic English knowledge.

3.3 Research instruments

Research instruments used involved two aspects of a word form (written) to measure receptive and productive dimensions and a focus group for gaining participants' deeper perceptions after the intervention. The research instruments used in the present study are illustrated in Table 4

Table 4 Research instruments

Research Questions	Research Instruments	Time of Distribution
1. What are the impacts of Facebook input to enhance Thai EFL primary school learners' vocabulary development?	Receptive and productive vocabulary tests (FIT and FRT)	Before/after using the teaching period
2. What are the impacts of education levels on Thai EFL primary school learners' ability to acquire vocabulary?		
3. How do Thai EFL primary school learners perceive Facebook interaction to enhance vocabulary development?	Focus group	After using Facebook as an instructional platform

The tests were used to measure the participants' vocabulary knowledge before and after the treatment. The tests were administered by the researcher at different times. The first test (FIT), consisting of 30 items, measured the written form of receptive vocabulary knowledge. The second one (FRT), composed of 30 items, measured the

participants' written form of productive vocabulary knowledge. The FIT test was presented in a four-multiple-choice format to measure participants' written form of receptive vocabulary knowledge. In contrast, the FRT test required the participants to rewrite or reproduce the misspelling of the target word following the spaces given into the correct form to measure participants' written form of productive vocabulary knowledge. Both types of tests did not share the same vocabulary items. 60 vocabulary were randomly selected from the targeted words in the treatment period to be in the tests.

The following research instruments were developed and applied to collect the data to address the established research questions.

3.3.1 The Form Identification Test (FIT)

The Form Identification Test (FIT) (see Appendix B), adapted based on the format of Webb (2005, 2009), Zhong (2014), and Sukying & Nontasee (2022), was administered to measure receptive knowledge of written form after being validated. The format of the current test was adjusted to fit the level of the participants who are at the primary school level. The images, the colors including the fonts were considered and involved in the test format. The format version of the form identification task was validated by producing the reliability of Cronbach's alpha for internal consistency, indicating acceptable reliability (Zhong, 2014). In particular, the written form aspect included word spelling knowledge (Nation, 2013; Webb, 2020). Therefore, this test was used to measure receptive knowledge of written form (word spelling knowledge).

The test required participants to choose the correctly spelled target words to match the meaning by looking at the image given. Each item captured one target word. Each item had one correct form of the target word, one existing word, and two pseudo-words as distractors. The distractors were created to resemble the target words both phonetically and orthographically. It was assumed that being able to discern correct and incorrect word forms makes an accurate choice. Despite the possibility of learners guessing while completing the task, this format of form recognition task was chosen for the present study because it only assessed receptive word form knowledge. There

were 30 questions, and one point was awarded for each correct answer, and zero point is awarded for a blank, not-attempted, or incorrect answer. They had 60 minutes to complete the tests. An example of FIT was shown in Table 5

Table 5 The Form Identification Test (FIT)

Please select the correct word spelling to match the image given.						Point
(**d**)		1.	a. hend	b. home	c. hame d. hand	1
(**a**)		2.	a. lite	b. lait	c. leik d. like	0
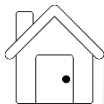
3.3.2 The Form Recall Test

The Form Recall Test (FRT) (see Appendix C), adapted based on the productive knowledge of orthography task by Webb (2005), was employed to measure productive knowledge of written form, particularly word spelling knowledge (Nation, 2013; Webb, 2020; Sukying & Nontasee, 2022). The format of the current test was adjusted in terms of the looks to fit the level of the participants who are at the primary school level. The images, the colors, and the fonts were included in the test format. The test format version was considered an isolated measure of productive spelling knowledge. As such, the test was kindly designed to measure the participants assumed as A1-level learners according to CEFR (Webb, 2005) and likely to have learned and seen high-frequency words (Nation & Waring, 1997). At least, that was enough to lead them to recall a close approximation of the target words. In this regard, this test could independently measure learners' productive knowledge of word spelling.

The test, consisting of 30 items, required participants to rewrite or reproduce the misspelling of the target word plus one extra letter into the correct form following the spaces given within 60 minutes given. This test encouraged participants' ability to recall the word and produce it correctly in the form to match the meaning by looking at the image given. All of the target words were provided as derivative forms to prevent the recognition of knowledge from other tests. No points were awarded for a blank or more than two incorrect letter positions. Instead, one point was awarded for

less than two incorrect letter positions for their partial knowledge. Two points were awarded for each fully correct response. An example was shown in Table 6

Table 6 The Form Recall Test (FRT)

Please use the given letters to spell the word in the blank to match the image given.			
Image	**Target word**	**Answer**	**Point**
	1. t e r i e	<u>t r e e</u>	2
	2. b o l t e a t l	<u>b o t l t e</u>	1
	3. h u s i o e	<u>h s o i e</u>	0

3.3.3. Focus group

- The focus group aimed to gain high-quality data in a social context (Patton, 2002), which fundamentally helped understand a particular issue from the viewpoint of the research participants (Khan & Manderson, 1992). Thus, the focus group was used to investigate learners' perceptions towards using the Facebook closed group to support their English language learning, particularly form-focused vocabulary knowledge, applying content analysis. The interview took place after completing the post-test a week later in one closed room at school. The questions in focus group interviews were asked in the participants' mother tongue to avoid misunderstanding or confusion. 12 representatives of participants were selected for the focus-group interview. The language used was Thai in order for the participants to feel comfortable to reveal their perceptions. The interviewer was a researcher himself in a position of their teacher, and the interviewer was trained to conduct the focus group by his experienced research advisor. They were categorized based on their vocabulary size (300-word, 600-word, and 900-word levels) yielding three groups of participants: small, medium, and large vocabulary sizes, respectively (Sukying, 2017; 2022). All of the questions were open-ended based on the

research question. The kinds of questions that the researcher will address using content analysis and interpretation began with "what" or "why" and "how" (Lochmiller, 2021). Some examples of the questions used for focus group were as follows:

- What are your general feelings about learning through the Facebook group?
- How do you like learning vocabulary through the Facebook group?
- What do you prefer between face-to-face learning vocabulary or online through Facebook group and why?

3.4 Establishing the test reliability and validity

The reliability and validity of these research instruments were assessed via the Index of Item-Objective Congruence (IOC) method. Three Thai experts who have been teaching English at the university and primary school for more than five years were asked to rate the congruence between objectives and items in the test. These ratings were then used to calculate the IOC as follows:

+1 means   a test item is considered congruent with the objectives

0 means   a test item is considered neutral in terms of whether it is congruent with the object

-1 means   a test item is deemed not congruent with the objective

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

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

IOC means the index of congruence

R   means the total score from the score the opinion of the experts

N   means a number of experts

The reliability of these research instruments was also assessed via a pilot study with 50 grade six students from another government primary school with the same background. The students in the pilot study have similar characteristics, in terms of educational background, as the participants in the main study. The pilot study students

must complete the two tests (FIT and FRT). The results from these tests will be then analyzed using the coefficient Cronbach alpha; Cronbach's alpha is a measure of internal consistency or reliability, that is, how closely related a set of items is as a group.

3.5 Data collection procedure

3.5.1 Selecting target words for the study

All target words were chosen from the textbook used for grade 6 basic English course, called English For Students Book 6. The Books Publishing Co., Ltd., publishes the book, and its contents were based on basic English language learning content in the current Thai basic education core curriculum. One hundred thirty content words were keenly selected from chapter 1 to chapter 9 of the book. As Nation (2001) proposed, L2 learners should focus L2 vocabulary study on the small group of words they are most likely to encounter in written and oral forms: high-frequency vocabulary. High-frequency vocabulary lists worth considering in this study were Browne, Culligan, and Phillips' (2013) New General Service List (NGSL), which lists the essential high frequency of 2,818 words for L2 learners. To ensure that all selected words were high-frequency and worth learning, they were checked against the NGSL. The words not found in the list were eliminated from the study. After carefully being checked against NGSL, only ninety-one words remain. The words were piloted with a group of participants using an English vocabulary checklist test (see Appendix A), as shown in Table 7 The participants were given 50 minutes to finish the test. The known words were eliminated. Finally, the top eighty unknown vocabulary items from the checklist test were used as the final targeted words during the treatment. However, the list of these target words was then rechecked to determine whether they were suitable for prospective participants' English proficiency levels by a group of experts in the field of vocabulary teaching or English language teachers (both English native speakers and EFL teachers). Eighty target words were included in the finalized list for the main study after being checked by the group of experts.

Table 7 Examples of an English vocabulary checklist test

Word	Known word	Unknown word	Meaning
animal			
group			
meet			
see			
class			

3.5.2 Data collection procedure for the main the study

The data collection procedure was completed over two-month periods. The participants were given a vocabulary checklist test in the first week. This test included 130 words based on the school textbook, English for Students 6. Participants had 50 minutes to mark their unknown words. To answer the checklist test, the students needed to check (✓) if they knew the word and wrote down its meaning. The participants were asked to mark a cross (×) if the given word was unknown. Based on the vocabulary checklist test results, 100 words that were the most unknown to the students were identified as the vocabulary taught during the experimental period.

Regarding the test administration, the participants had 60 minutes to finish doing each test. A 15-minute break was provided between the productive and receptive tests to reduce participants' fatigue. Before the tests were administered, the instructions and a few examples of the tests were provided to all participants in their native Thai language. The same tests were administered again after the experiment was completed. The focus group was also conducted with the participants at the end of the teaching period to collect their perceptions towards using Facebook input to support their English language learning, especially form-focused vocabulary knowledge. Figure 1. illustrates the research procedures of the present study.

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┌─────────────────────────┐        ┌─────────────────────────┐
│                         │        │                         │
│                         │        │        Pre-test         │
│  Vocabulary Checklist   │───────▶│      (FIT and FRT)      │
│          test           │        │                         │
│                         │        │                         │
└─────────────────────────┘        └─────────────────────────┘
                │                                 │
                ▼                                 ▼
┌─────────────────────────┐        ┌─────────────────────────┐
│                         │        │                         │
│  Facebook as a platform │───────▶│        Post-test        │
│      of instruction     │        │      (FIT and FRT)      │
│                         │        │                         │
└─────────────────────────┘        └─────────────────────────┘
                │                                 │
                ▼                                 │
┌─────────────────────────┐                      │
│                         │◀─────────────────────┘
│                         │
│       Focus group       │
│                         │
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└─────────────────────────┘
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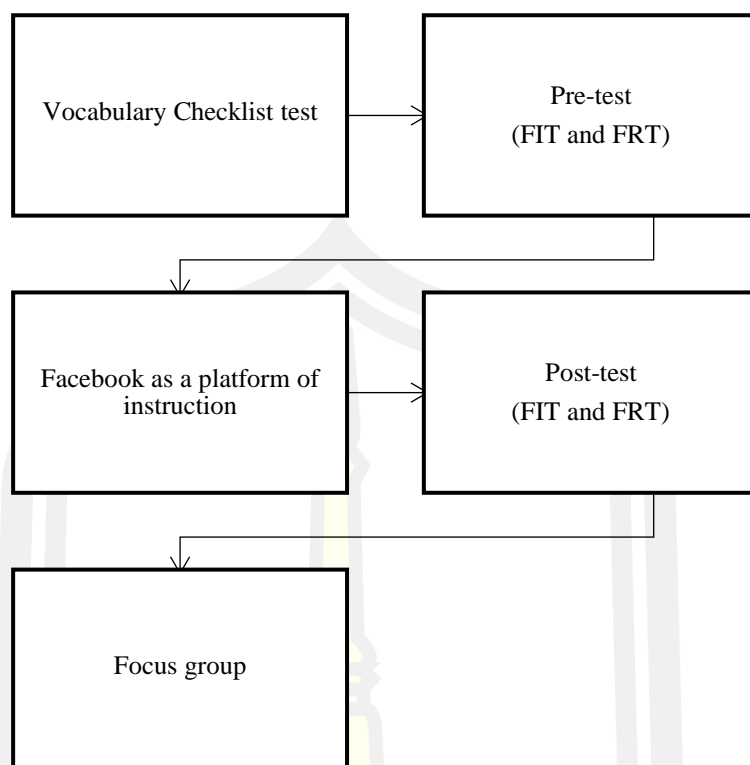
Figure 1 Research procedures of the present study

3.6 Tasks and teaching plans through Facebook

The activities performed via Facebook were developed to enhance participants' written form of word knowledge. The researcher designs the teaching materials based on Nation's (2013, 2022) range of written form-focused activities: spelling rules input and word dictation and Nation's (2013, 2022) three cognitive processes. All activities mainly asked the learners to consciously watch the content videos posted, then left their comments below to perform their understanding. The researcher acted as the facilitator while conducting the class via the Facebook closed group encouraging the participants to pay attention to the class and interact with the contents provided and each other. During the course, the facilitator ensured whether the learners were still in the class by checking in the comment sections. Those who did not attend the real-time class were not given participation points for each time but still got points for commenting afterward.

There were some stages of learning via the Facebook closed group following Nation's (2013, 2022) range of written form-focused activities: spelling rules input and word dictation and Nation's (2013, 2022) three cognitive processes as shown in figure 2. The details of teaching steps are also elaborated afterwards.

Spelling rules input	Noticing process	Word dictation
Hear and see what is presented.	Notice and choose the word provided. (receptively)	Recall and produce the word. (productively)
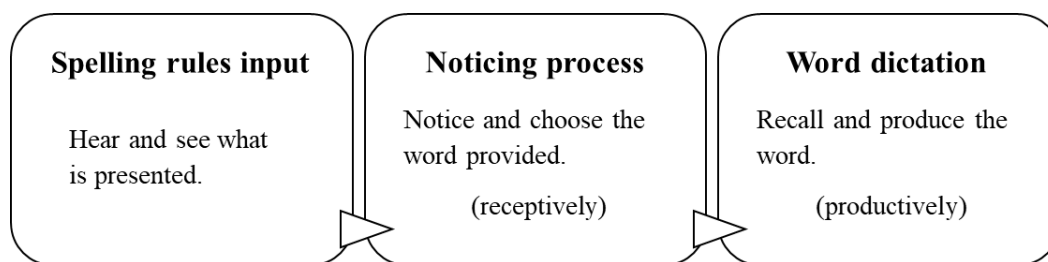
Figure 2 Overall picture of learning procedures

In the first stage, the researcher posted texts to greet all participants and checked if they were ready, and participants' attendance was checked before and after the class by observing in the comment sections. In the second stage, the researcher presented a few target alphabets and their sounds according to Phonics by posting a short instructional video created by the researcher, as shown in Figure 2 Here, students needed to pay good attention to the video so that they can carry out the task on a few following posts.

Figure 3 A short instructional video presenting the sound of each alphabet

To check their understanding, images created by the researcher containing a word formed by using the presented alphabets with three choices of the L1 word, representing its pronunciation, were posted afterward. The learners must choose the answer by posting it in the comment section. Here, the teacher could see if the participants paid enough attention to the previous post. Figure 3 illustrates this activity.

Figure 4 An image along with a word and choices of the L1 equivalent pronunciation

In the next stage, two short videos involving two target words, as shown in Figure 4, were uploaded. Each video consisted of the sound pronounced by the researcher with three choices of words provided. The learners were required to choose the correct word to match the sound. They were informed that they could access the video unlimitedly until satisfied and understood. Again, the learners need to intentionally listen to the sound representing its pronunciation and notice which form of the word was correct.
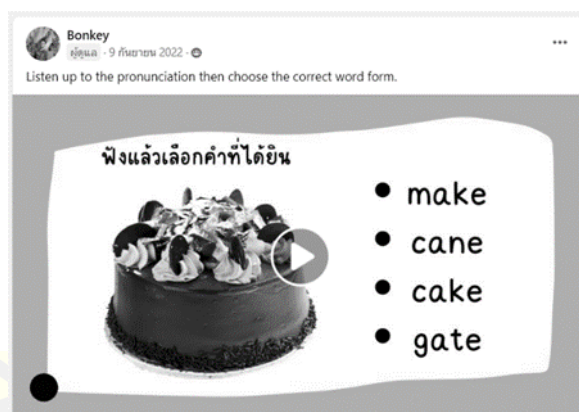
Figure 5 A video consisting of the pronunciation with three choices of words provided

Additionally, two videos involving two target words were uploaded then. Each video uploaded consisted of an incomplete word and the pronunciation, as illustrated in Figure 5 The learners needed to type the complete words regarding pronunciation in the comment section after hearing the pronunciation. This section of the activity asked the participants to pay close attention to the video, listen to the pronunciation, notice the alphabet and spaces given, and produce the complete word correctly.

Figure 6 A video consisting of the incomplete word and the pronunciation

Before one learning process ends, the researcher posted texts to ask about the participants' s feelings (e.g., Are you happy with today's learning?) and talk about all learned words for one lesson in order to review what is learned by letting them type the learned words in a row in the comment section. The researcher rechecked attendance. The table presenting points gained by participation as a leaderboard was sent to the Facebook closed group after the class for learning reinforcement.

3.7 Data Analysis

For the two tests, the scores for each test were analyzed by descriptive statistics, including mean ($\bar{X}$), standard deviation (S.D.), and percentile in the Statistical Package for the Social Science (SPSS) program. After that, inferential statistics, and t-test analysis, were used to analyze whether test scores are statistically significant.

The focus group interview applied content analysis. The focus group was audio-taped and then transcribed. Before transcribing, the researcher listened to the full recording and determined the time, then wrote a draft first, used short-cuts, proofread the draft and formatted the transcript. The content analysis was used to determine the presence of certain words, themes, or concepts within some given qualitative data (i.e. text). Using content analysis, researchers can quantify and analyze the presence, meanings, and relationships of certain words, themes, or concepts. The themes derived from the content of the data themselves so that what was mapped by the researcher during analysis closely matches the content of the data. Finally, interpreted the data and wrote the report to provide a compelling story about the data based on the analysis. The procedure of the analysis was shown in Figure 7.
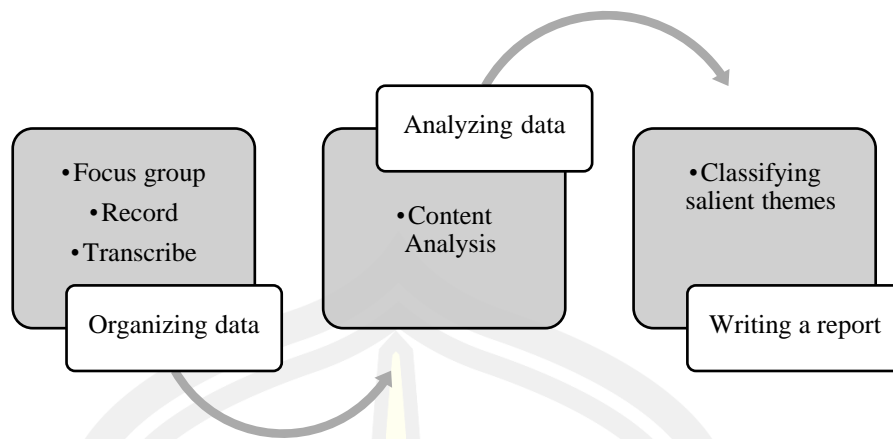
Figure 7 The procedure of the focus group's data analysis

3.8 Summary of the chapter

The current study applied a quantitative approach to assess the effects of Facebook on the vocabulary knowledge of Thai EFL primary school learners. Twenty-four participants were selected using convenience sampling in this research. One hundred English words that were considered unknown to the students were chosen as the targeted words for the treatment. The treatment period took nine weeks. Before the treatment period, both groups were given a pre-test assessing the written form of both receptive and productive vocabulary knowledge. After the treatment period, they were provided with the post-test. A focus group was also conducted with the participants to gain a deeper understanding and feeling of their perceptions towards the use of the treatment. Data collected from the tests were analyzed using mean, S.D., and t-test correlation. Data from the focus group was analyzed using content analysis.

CHAPTER IV
RESULTS

This chapter reports the results of the current study on the effect of Facebook interaction on Thai EFL primary school learners' vocabulary development. The chapter also presents the results on Thai primary school participants' perceptions about the use of Facebook interactions in vocabulary learning.

4.1 The effect of Facebook input on Thai EFL primary school learners' vocabulary development

The current study investigated whether Facebook interaction enhanced Thai primary school students' vocabulary development. The study used a pretest-treatment-posttest research group (one pre-and-posttest research design). The only one group participants (N = 24) first received the pretest, then the Facebook-instructional treatment, which concentrates on written form knowledge of a word, and finally, the posttest. The tests assess the participants' written form knowledge, both receptively and productively. Specifically, the following tests were used: the Form Identification Test (FIT), which measures receptive knowledge, and the Form Recall Test (FRT), which measures productive knowledge. The participants were also asked to participate in a focus group after the treatment.

Table 8 summarizes Thai EFL primary school learners' test performance scores on receptive and productive knowledge tests. The results showed that Thai primary school participants achieved an average score of 8.08 (26.9%) on the FIT pretest and 5.58 (18.6%) on the FRT pretest. On the posttests, participants scored 13.08 (43.6%) on the FIT and 9.45 (31.6%) on the FRT.

Table 8 A summary of students' performance on receptive and productive written form knowledge

Tests	Pretest			Posttest			t-value	d
	$\bar{x}$	%	S.D.	$\bar{x}$	%	S.D.		
Form Identification Test (FIT)	8.08	26.9	3.41	13.08	43.6	5.36	8.95*	1.11
Form Recall Test (FRT)	5.58	18.6	3.42	9.45	31.6	4.86	7.01*	0.92

Notes: *Significant at the 0.05 level (p<0.05), *N* = 24

A dependent-samples *t*-test was conducted to determine whether the differences in pretest and posttest scores were significant. The analyses revealed that the difference between pre- and posttest scores was significantly different with large effect sizes for both the FIT (*t* = 8.95; p < 0.05, *d* = 1.11) and the FRT (*t* = 7.01; p < 0.05, *d* = 0.92). These results are also illustrated in Figure 7   An independent-samples t-test also revealed a statistically significant difference between the receptive test (FIT) and productive knowledge (FRT) at pretest (*t* = 8.66, *p* < 0.05, *d* = 0.73) and posttest (*t* = 6.92, *p* < 0.05, *d* = 0.71). All effect sizes were large. These findings suggest that receptive vocabulary knowledge is acquired before productive knowledge. Overall, the current findings suggest that Facebook interaction improves Thai EFL primary school students' vocabulary development in both receptive and productive knowledge.
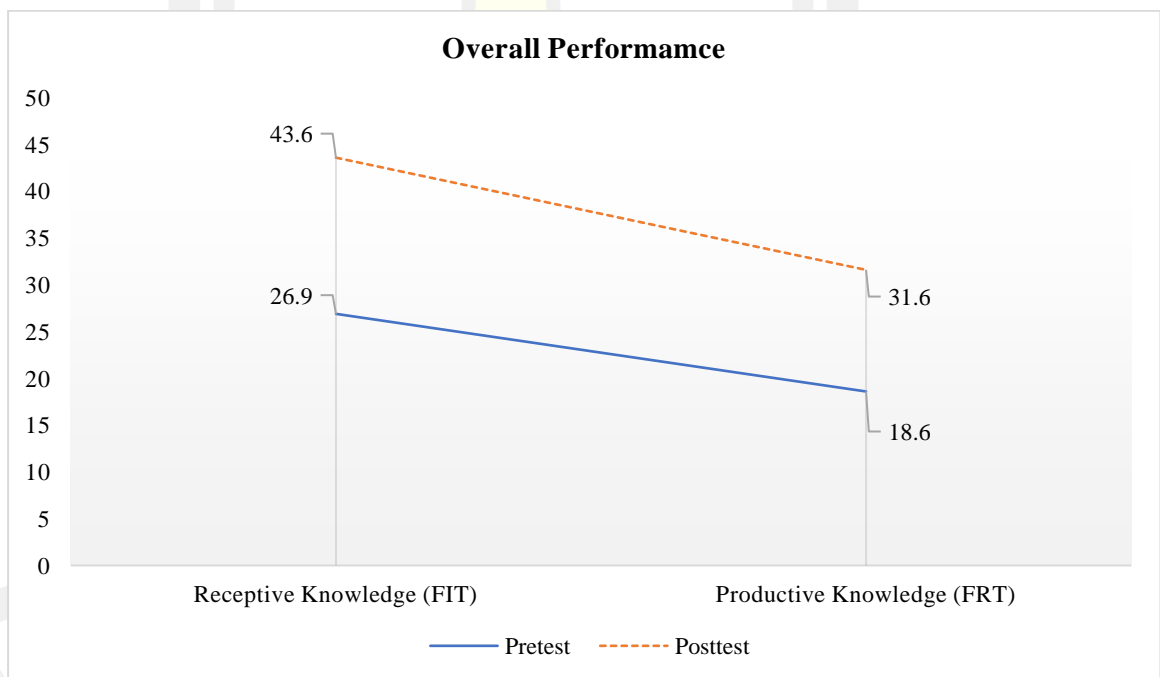
Figure 8 The summary results of pre and posttest score mean percentage of overall performance

4.2 Knowledge of receptive and productive vocabulary between education levels

Figure 9 illustrates the scores for both fifth- and sixth-grade participants on the FIT and FRT at pretest and posttest. The figure suggests that posttest scores on FIT and FRT were higher than the pretest scores for both grades. In addition, the sixth-grade participants performed better on all tests than the fifth-grade participants. Specifically, the sixth-grade participants' pretest scores (FIT; 30.77% and FRT; 23.07%) were higher than the fifth-grade participants' pretest scores (FIT; 22.43% and FRT; 13.33%). Furthermore, the sixth-grade participants' posttest scores (FIT; 22.43% and FRT; 13.33%). Furthermore, the sixth-grade participants' posttest scores (FIT; 49.73% and FRT; 35.90%) were higher than the fifth-grade participants' posttest scores (FIT; 36.37% and FRT; 26.37%).
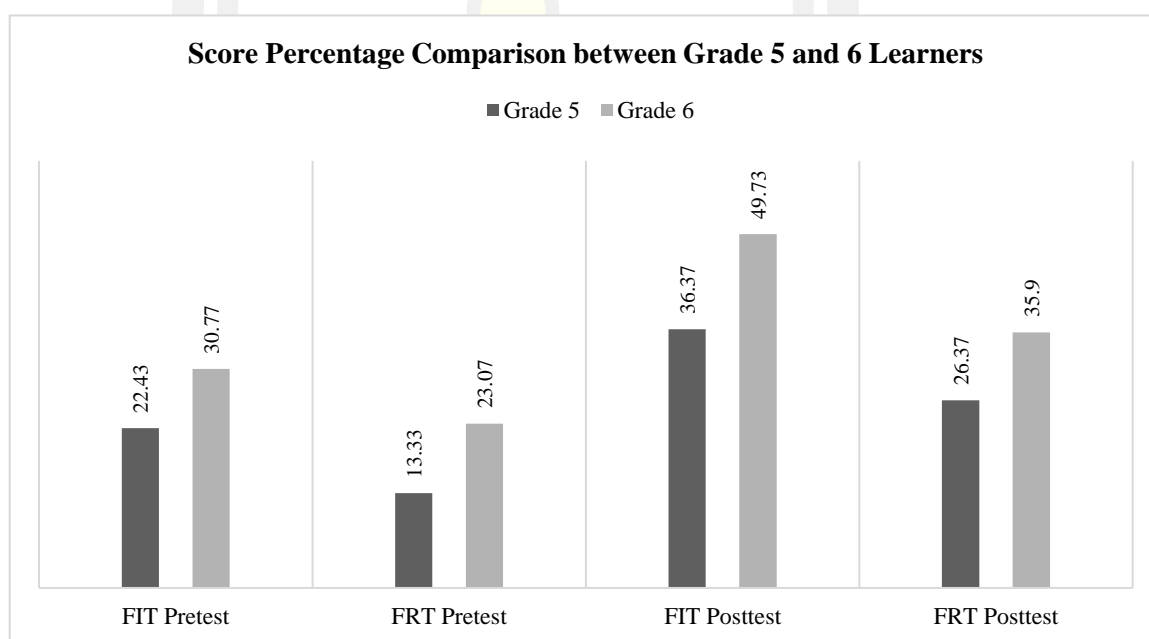
Figure 9 Score percentage comparison between Grade 5 and 6 learners

Table 9 summarizes the findings based on education levels. An independent-sample t-test was used to compare the test performance of the two education levels. There was a significant difference in pretest scores on the FRT ($t = 2.26$, $p < 0.05$, $d = 0.93$), with a large effect size (Cohen, 1998; Hopkins, 2002). There were no significant differences between Grade 5 and Grade 6 students on the FIT pretest ($t = 1.89$, $p = 0.07$) and posttest ($t = 1.94$, $p = 0.07$), or on the FRT posttest ($t = 1.47$, p = 0.16, $d = 0.62$). These results suggest that the participants master their word knowledge in

accordance with their education levels, and students' language exposure and experience significantly impact their ability to learn a word.

Table 9 Receptive and productive test performance between educational levels

Time	Test	Grade 5 (*n* = 11)			Grade 6 (*n* = 13)			*t*-value	*d*
		M	%	*SD*	*M*	%	*SD*		
Pretest	FIT	6.73	22.43	2.61	9.23	30.77	3.68	1.89	0.78
	FRT	4.00	13.33	2.83	6.92	23.07	3.40	2.26*	0.93
Posttest	FIT	10.91	36.37	3.88	14.92	49.73	5.87	1.94	0.81
	FRT	7.91	26.37	2.98	10.77	35.90	5.82	1.47	0.62

Notes: *Significant at the 0.05 level (p<0.05)

4.3 Participants' perceptions regarding Facebook interaction

This section presents the results on the participants' perceptions and feelings on learning vocabulary through Facebook interaction. These results are based on the qualitative description and analysis of the responses of the 12 participants selected for the focus-group interview. The participants were categorized based on their vocabulary size (300-word, 600-word, and 900-word levels) yielding three groups of participants: small, medium, and large vocabulary size, respectively (Sukying, 2017; 2022).

The current study described student perceptions as socially-constructed representations, reflecting their behaviors and feelings while learning vocabulary through Facebook interaction. These variables were established as a content analysis of the study's qualitative findings. Table 10 illustrates the salient themes derived from the qualitative data.

Table 10 The salient themes for qualitative data analysis

Themes	Sub-themes	Salient characteristics
Learning atmosphere	enthusiasm	positive, helpful, supportive, inviting, attractive, exciting, enthusiastic, active
	competitiveness	competitive, comfortable, relaxing, cozy, fun
Content delivery	structure	well-organized, interesting, boring, simple, engaging, inviting, attractive
	material	comprehensible, understandable, easy, clear
Learning challenge	engagement	engaging, time-consuming, noninteractive, interactive
	self-consciousness	unconfident, embarrassed, uncomfortable

4.3.1 Learning atmosphere

The learning atmosphere theme involved students' perceptions on overall learning activities. Two sub-themes were identified. The first was 'enthusiasm'. This optimistic perception indicated that primary school participants had positive feelings about learning vocabulary through Facebook interaction. More precisely, twelve participants enjoyed the activity through Facebook learning. Participants argued that Facebook was a new platform that could draw their attention to learning new vocabulary. Participants also noted that Facebook interaction made their learning atmosphere relaxing and exciting. Regarding competitiveness, five participants indicated that learning vocabulary through Facebook activities was competitive. Table 11 shows the number and percentage of participants' responses to Facebook interaction under the theme of 'learning atmosphere' and its subthemes.

Table 11 Participants' responses to Facebook interaction under the theme of 'learning atmosphere'

Theme	Sub-theme	Salience	Participants (%)
Learning atmosphere	enthusiasm	positive, helpful, supportive, inviting, attractive, exciting, enthusiastic, active	12 (100)
	competitiveness	competitive, comfortable, relaxing, cozy, fun	8 (67)

Table 12 illustrates the participants' statements regarding the learning atmosphere of Facebook interaction. Specifically, this table reflects the thoughts in regard to the concept of 'enthusiasm' from the participants with different vocabulary sizes [i.e., small vocabulary size (S), medium vocabulary size (M) and large vocabulary size (L)].

Table 12 Participants' statements under the learning atmosphere's subtheme 'enthusiasm'

Participants	Statements
S1	*I liked learning through Facebook and watching videos. It was exciting watching them.*
S2	*It was not like when I learned with you in class, and it was more attractive.*
S3	*I really wanted to see what was coming next. Something got me so enthusiastic, and I liked it.*
S4	*Learning through Facebook really helped me remember vocabulary. It was so helpful.*
M1	*I liked it. I didn't feel as pressed as I used to when I studied in class sometimes. It was exciting.*
M2	*I agreed that learning via Facebook was attractive and exciting, and it was new. That's what made me keep active.*
M3	*Learning via Facebook was so inviting. It was different from the actual class, and I liked it.*
M4	*I found myself very active, which I had never felt before in learning vocabulary via Facebook. I couldn't wait to learn more.*
L1	*I think that it is a new way to study English. I had never experienced it before. This is how I like it. Learning is easier because I watch the video and think of the answer. To me, it is so much supportive, and I like it.*

L2	*The way I learned English through Facebook was so inviting. I think that it is easy to learn. It was helpful in remembering vocabulary.*
L3	*I really think that learning via the Facebook group gave me something enthusiastic and supportive because I had never tried to do this before.*
L4	*I could see that my classmates enjoyed the class a lot, and so did I. Most of the things looked positive in learning.*

Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

Table 13 shows the participants' perceptions about the learning atmosphere under the subtheme of 'competitiveness'. These responses indicate that the students perceived Facebook interaction as 'competitive' in learning vocabulary outside classroom contexts.

Table 13 Participants' statements under the learning atmosphere's subtheme 'competitiveness'

Participants	Statements
S1	*I had some fun being a part of the vocabulary spelling competition and liked it.*
S2	*I liked it when I must compete with everyone.*
S4	*The way you had us compete got me more relaxed and comfortable.*
M2	*I must say that the competition during the learning process made the atmosphere more fun and relaxing.*
M3	*It made me forget that I was learning and thought it was just a competition. It gave me nothing but a cozy and relaxing time.*
L2	*I believe everyone would feel the same way that everything was competitive, and I liked it. The stress was not there at all.*
L3	*I loved it when everyone wanted to be the fastest one to post the answer, and it was so competitive.*
L4	*It was so much fun! It really was. The competition was what made me feel more comfortable while learning.*

Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

4.3.2 Content delivery

The content delivery theme included students' perceptions on how content through the Facebook group was organized and delivered. Two sub-themes were also identified. The first was 'structure'. Seven participants mentioned that the content structure was attractive, well-organized, and engaging. Some also noted that the manner in which the teacher organized the content structure was inappropriate.

Regarding 'material', five participants indicated that the activities delivered via Facebook were easy and understandable. The number and percentage of participants' responses to Facebook interaction under the theme of 'content delivery' are shown in Table 14, and participants' statements under the subtheme 'structure' and 'material' are shown in Table 15 and 16, respectively.

Table 14 Participants' responses to Facebook interaction under the theme of 'content delivery'

Theme	Sub-theme	Salience	Participants (%)
Content Delivery	structure	well-organized, interesting, boring, simple, engaging, inviting, attractive	7 (58)
	material	comprehensible, understandable, easy, clear	5 (42)

Table 15 Participants' statements under the content delivery's subtheme 'structure'

Participants	Statements
S1	*The videos. There were the pictures and the spellings. Simple and interesting to watch.*
S4	*The videos are interesting. They are short, and I might feel bored if they are too long. It was well-organized.*
M1	*Its looks were simple and attractive. The images, the letters, and your voices were there, and it was quite engaging.*
M2	*I liked how you organized the videos. They were inviting, and I could watch them all day.*
M3	*I liked the videos, but I kind of expected them to be a bit longer and have different styles, and it might be too boring to watch the same pattern of videos.*
L2	*I liked the videos. They looked cute and colorful.*
L3	*I think it's because of your videos. They consisted of pictures, spelling, and pronunciation, and I could easily understand them well because they were not so long and simple to watch the whole.*

Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

Table 16 Participants' statements under the content delivery's subtheme 'material'

Participants	Statements
S2	*It's easy to follow by watching the videos.*
S3	*After watching the video, I came up with the answer right away, and it was easy.*
L1	*It may be because of the video, and it is more understandable than just hearing you describe the content alone. I can simultaneously see the picture and the spelling while listening to your voice.*
L2	*I think it's because of the video. They are short, clear, and easy to follow."*
L3	*I think it's because of your videos. They consisted of pictures, spelling, and pronunciation, and I could easily understand them well because they were not so long and simple to watch the whole.*

Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

4.3.3 Learning challenge

The learning challenge theme involved student perceptions concerning the challenges and issues they encountered during the Facebook interaction. Two sub-themes were identified. The first sub-theme was 'engagement'. Five participants revealed that online learning might be inappropriate, time-consuming, and problematic due to their individual limitations. Some showed that Facebook provided them with the good challenge of engaging. Some argued that learning vocabulary via Facebook interaction had some problems regarding interaction and content accessibility. Another sub-theme was 'self-consciousness'; six participants indicated that they felt unconfident, embarrassed, and uncomfortable at some point learning vocabulary through Facebook. The number and percentage of participants' responses to Facebook interaction under the theme of 'learning atmosphere' are shown in Table 1 7 , and participants' statements under the subtheme 'engagement' and 'self-consciousness' are shown in Tables 18 and 19, respectively.

Table 17 Participants' responses to Facebook interaction under the theme of 'learning challenge'

Theme	Sub-theme	Salience	Participants (%)
Learning challenge	engagement	engaging, interactive, time-consuming, noninteractive	5 (42)
	self-consciousness	unconfident, embarrassed, uncomfortable	4 (33)

Table 18 Participants' statements under the learning challenge's subtheme 'engagement'

Participants	Statements
S2	*My phone did not perform well. It is quite old, and it was time-consuming trying to access the online system.*
S4	*I found it really tough. I really want to engage every time you conduct this online class. I hope to attend this kind of learning more.*
M2	*If I can choose, I will go for face-to-face learning. Online learning gave me limitations in interaction, and I prefer face-to-face interaction. The connection was poor too.*
M3	*Interacting with my classmates on Facebook convinces me to learn more.*
L4	*The content on Facebook looks more engaging than how I learn English in the classroom.*

 Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

Table 19 Participants' statements under the learning challenge's subtheme 'self-consciousness'

Participants	Statements
S2	*Everyone was so good. They came up with the right answer, and I was uncomfortable with that if I came up with the wrong answer.*
S3	*Sometimes I was not confident about posting the answer, and I needed a little more time to rewatch the videos until I was confident enough.*
M2	*It was uncomfortable and irritable when the connection loss happened.*
L4	*I felt a little embarrassed about my phone since it's a bit older than others. Sometimes, I couldn't post the answer on time.*

 Note: S=small vocabulary size; M=medium vocabulary size; L=large vocabulary size

In conclusion, this chapter summarizes the results from the current study in response to research questions. The next chapter will discuss these findings within the theoretical framework and in regards to previous results, particularly in the EFL context.

4.4 Summary of the chapter

In conclusion, this chapter summarizes the results from the current study in response to research questions. The students' performance on receptive and productive written form knowledge after the treatment phase was significantly higher. It could draw conclusion that Facebook input facilitated vocabulary knowledge of the participants. Moreover, Grade-6 participants outperformed grade-5 ones in both tests suggesting that the participants master their word knowledge in accordance with their education levels. The qualitative data showed the participants' perceptions in three main themes: learning atmosphere, content delivery and learning challenge with more sub-themes. The next chapter will discuss these findings within the theoretical framework and in regards to previous results, particularly in the EFL context.
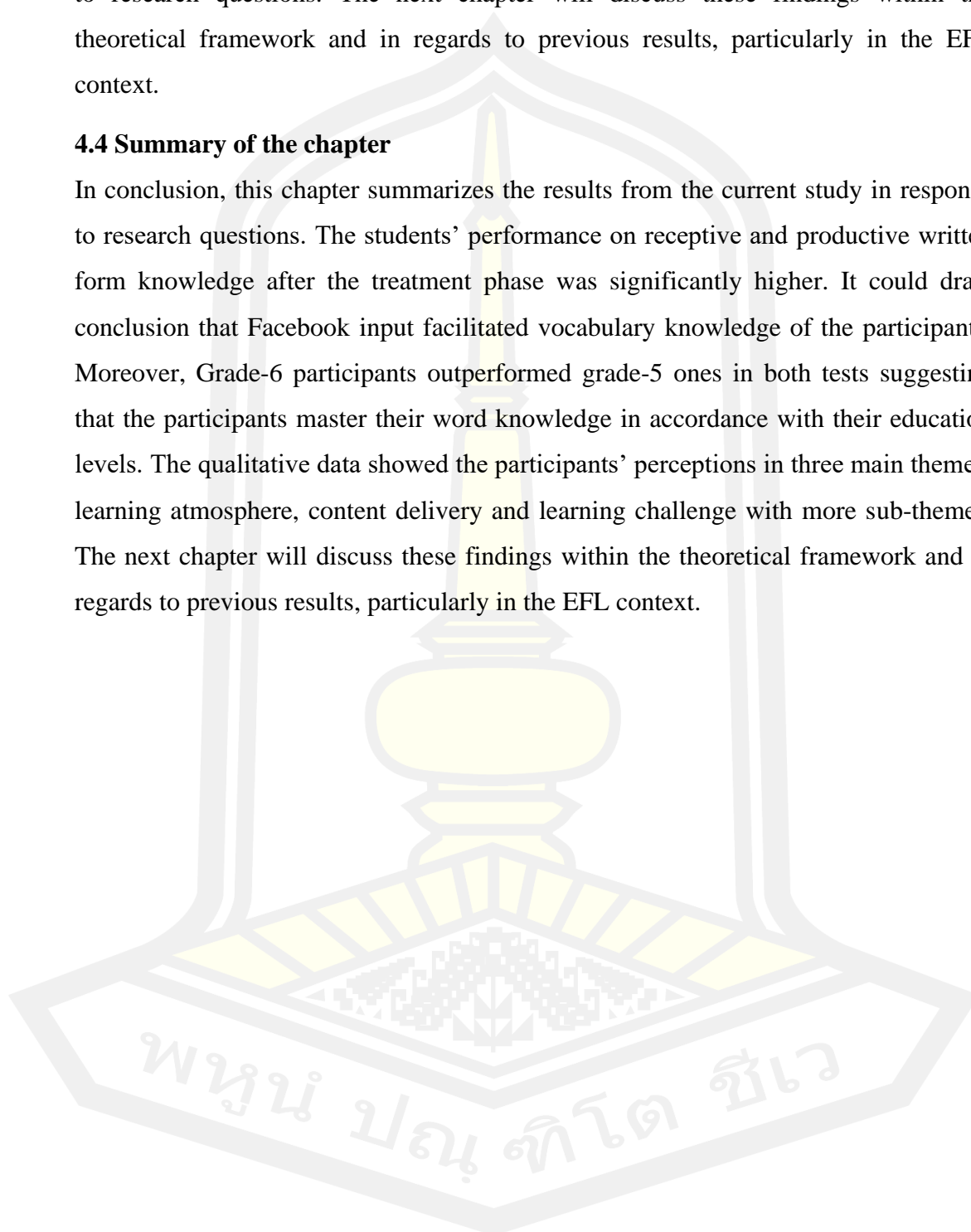
CHAPTER V
DISCUSSION AND CONCLUSION

The preceding chapter presented the statistical and qualitative analysis of the findings in response to the research objectives and questions. This chapter will discuss the research results with the theoretical framework underlying the study. It will also interpret its findings with previous studies to see if any similarities or differences could be observed. Assumingly, the study findings might yield fruitful information and cast light on the role of Facebook as a social platform for language learning, particularly vocabulary. In addition, this chapter further delves into the deeper interpretation of qualitative findings to better gain insight into learners' perceptions of using Facebook in learning vocabulary outside the classroom context. Other related implications and recommendations for future studies are also discussed.

5.1 The enhancement of the written form of word knowledge using Facebook

The present study aimed to explore whether Facebook enhanced Thai EFL primary school learners' vocabulary development. Here, Facebook, regarded as a communicative tool in language learning, is described as a platform of interaction between a teacher and students and/or language content and students. It was hypothesized that Facebook could enhance students' vocabulary learning and development among primary school students. In order to respond to research questions, two measures (i.e., the Form Identification Test (FIT) and the Form Recall Test (FRT), were created and pioneered before the main study. The findings showed significant effects of Facebook on vocabulary knowledge in Thai primary school students receptively and productively. These findings argue with previous results (e.g., Salazar, 2019; Terantino & Graf, 2013), indicating that Facebook is a useful platform for vocabulary learning.

The improved knowledge of a word form could be attributed to vocabulary learning from cognitive processes: noticing, retrieval, and creative use under the suggested type of activities to teach written form of vocabulary: spelling rules input and word dictation by Nation (2013, 2022). Pointedly, a learner must pay close attention to the target L2 word to notice it while the spelling rules input was given. The participants

were required to intentionally watch the content video, containing texts, images, and sounds, posted on Facebook so that they could come up with productive spelling as the answer. Also, all the content videos were unlimitedly accessible, meaning that you could repeatedly encounter the target words. While the noticing process guides or leads to learning L2 words, retrieval solidifies each word's spelling in the learners' minds, as shown by typing the correct spelling form of a word in the comment section regarding the sound and picture provided (word dictation). This implies that the likelihood that the target word will become more deeply ingrained in the learner's memory increases with the frequency with which the specific lexical item is retrieved throughout a learning process. These processes encourage students to reconsider their understanding of these phrases. When deliberately learning through Facebook satisfied these requirements and enhanced vocabulary knowledge, the phenomena that aid in helping the learners memorize this term is the reason for their use. Thus, the teacher also allowed learners to produce all the learned words by posting them together after the class ended to see their use even in the decontextualized settings due to their level of proficiency. Explicit learning attempts to learn vocabulary are effective and worth the effort (Nation & Meara, 2010). The current findings are in line with previous studies that repetition and retrieval of the L2 word extend its meaning or definition, and repetitive exposure to and use of it will lead to the learner to better understand each sense of the word students encounter (Hulstijn & Laufer, 2001; Magnussen & Sukying, 2021; Yowaboot & Sukying, 2022). To conclude, the current study reaffirms the efficacy of using Facebook as an instructional platform for vocabulary learning and teaching.

The gains in vocabulary knowledge could be attributed to Craik and Lockhart's (1972) levels (depth) of processing, indicating that the more learners engage with a new vocabulary item and the more control evolve with the item, the greater the opportunities it will be recognized and learned. Hulstijn and Laufer (2001) also suggested that engagement (involvement) for vocabulary acquisition incorporates three elements: need, search, and evaluation. 'Need' is the intrinsic motivation for learners to know some aspects of a particular word to better understand a reading passage. 'Search' is conceptualized as an attempt to find the required information, i.e., looking up the form-meaning link of the word or relevant information in a dictionary.

'Evaluation' involves retrieval of the lexical item's meaning or other related information, with the context of use, to see if it fits or is the best choice. The current study supported the notion of depth of processing that students participating in the Facebook group opted to recognize the target words more efficiently, as evinced by the increasing performance on receptive and productive knowledge measures. In this regard, the gains in vocabulary knowledge had higher engagement according to the Hulstijn and Laufer hypothesis. The current finding also aligns with previous claims that the tasks with relatively more need, search, and evaluation elements were more efficient (Ellis & He, 1999; Laufer & Goldstein, 2004; Laufer & Hulstijn, 2001).

Regarding education levels, the current study showed that students with a higher education level scored higher than their lower counterparts. Specifically, the sixth-grade participants outperformed on all tests than the fifth-grade participants. This result is consistent with previous studies that learners' knowledge of vocabulary increases with their language exposure and learning experience (Matwangsaeng & Sukying, 2023; Sukying, 2017, 2018, 2022; Sukying & Matwangsaeng, 2022). These findings also suggest that vocabulary learning is incremental; different aspects of a word are accessible at different times.

Overall, the current study found empirical evidence to support the positive effect of Facebook input on vocabulary acquisition and development in the Thai primary school context. The following section will discuss the qualitative findings based on focus group information to see students' perceptions about learning vocabulary through Facebook.

5.2 Participants' perceptions of instructional intervention

In response to Research Question 2, which sought to explore students' perceptions of learning vocabulary through Facebook, the content analysis was conducted and categorized the qualitative findings into salient themes: learning atmosphere, content delivery, and learning challenges. Each of the themes comprised two components. Specifically, the learning atmosphere included enthusiasm and competitiveness; content delivery encompassed content structure and material; and the learning challenge incorporated engagement and self-consciousness. For qualitative data analysis, 12 participants were carefully selected to ensure the trustworthiness of the

findings. The 12 participants were grouped into small, medium, and large vocabulary sizes, measured by the VLT (See Section 3.2), and each vocabulary size included four students for their focus group interview. The analyses of the qualitative findings provided support for quantitative results, indicating the usefulness of Facebook input in vocabulary acquisition and development in Thai primary school students.

Facebook input in the study draws a higher level of attention and enhances learning and retrieval. The notion of attention has been the centerpiece of many theories of SLA. Schmidt (1990, 2001) introduced the noticing hypothesis, indicating that nothing is learned unless it has been 'noticed'. Indeed, noticing *per se* does not result in the acquisition, but it is an important starting point. From this perspective, through Facebook input, students become consciously aware of how other vocabulary aspects differ from the target form. Schmidt also argues that students need to pay attention and notice the subtle feature of a given input (i.e., word form in this study) in order to subsume it in their vocabulary learning. Using Facebook with images and sounds, students' attention was drawn to different aspects of a target word. Students noticed the differences in written word form, integrated them into their memory, and successfully recalled them when it was needed.

Schmidt (2010) further suggested that seeing and hearing are necessary for L2 vocabulary learning. As applied to vocabulary activities using an online platform like Facebook in providing chances for learners to encounter and notice those target words, primary school participants must consciously notice L2 features or characteristics of the target words in the input activities and pay deliberate attention to the written form of lexical items in order to optimize their learning. For these reasons, target words, at least to some aspects, are likely to be acquired and attained more efficiently. Furthermore, vocabulary needs to be taught explicitly and directly in foreign language classrooms to compensate for the limited exposure and resources that may otherwise be available. These findings align with previous studies that show learning deliberate vocabulary is effective (Bubchaiya & Sukying, 2022; Magnussen & Sukying, 2021; Nation, 2011; Yowaboot & Sukying, 2022).

Specific to individual themes, the focus group participants reported that Facebook interaction promoted enthusiasm and competitiveness. The former perception

indicated that Facebook made learners attractive, supportive, and inviting. This perception could be attributed to the learning atmosphere. Facebook interaction might provide students with ample opportunities for vocabulary learning and retrieval. The Facebook features helped them be wholly attracted to the learning process and successfully pick up new words and efficiently recognize them when it was needed. Moreover, using Facebook with images and sounds in vocabulary learning provides an interesting atmosphere that captures students' interest and makes vocabulary learning a more enjoyable activity. In addition, due to Facebook features: pictorial techniques and online learning modes, students were provided more opportunities to actively learn and motivatedly engage in learning activites. Together, Facebook provides learners with opportunities to interact with other classmates outside classrooms, where learners can gain access to new vocabulary items through their friends' support. The following students' excerpts could support such a claim:

> *"I like learning through Facebook and watching videos. It was exciting watching them. (S1)*

> *"...learning via Facebook was attractive and exciting, and it was new. That's what made me active." (M2)*

> *"...through Facebook was so inviting. I think that it is easy to learn. It was helpful in remembering vocabulary." (L2)*

The participants also perceived Facebook interaction as 'competitive'. This could be because students were given an opportunity to be awarded the prize if they could provide the correct form of the target words posted on Facebook outside classroom practice. In addition, students were satisfied with this competitive learning atmosphere due to being awarded an extra score, suggesting higher motivation to study harder and win an activity. These excerpts gave evidence to support the finding:

> *"I had some fun being a part of the vocabulary spelling competition and liked it. I wanted to gain the highest marks, so I needed to highly pay attention to the next post" (S1)*

> *"I believe everyone would feel the same way that everything was competitive, and I liked it. The stress was not there at all." (L2)*

Overall, the qualitative findings indicated a positive learning atmosphere, suggesting that Facebook could be a practical platform for vocabulary learning due to its enthusiasm and competitiveness among Thai primary school participants.

In relation to 'content delivery, the qualitative data analyses showed that Facebook interaction provided a helpful platform for acquiring word knowledge aspects, particularly written word form or spelling. The positive perception of Facebook input might be due to its content delivery: structure and materials. Facebook provided well-organized linguistic features and materials for learning target words. Indeed, Facebook included prearranged materials for learning the target words before posting them on Facebook, allowing students to learn vocabulary items outside of classrooms. The following excerpts could support the claim:

> *"The videos are interesting. They are short, and I might feel bored if they are too long. It was well-organized." (S4)*

> *"I think it's because of your videos. They consisted of pictures, spelling, and pronunciation, and I could easily understand them well because they were not so long and simple to watch the whole." (L3)*

> *"It may be because of the video, and it is more understandable than just hearing you describe the content alone. I can simultaneously see the picture and the spelling while listening to your voice." (L1)*

Based on students' responses, it could be argued that word choices were the focus of the content, using Facebook as a platform for learning. The well-organized structure of the presentation could draw students' attention to vocabulary items and their linguistic features that could be easily remembered and learned. In addition, materials presented through Facebook are comprehensible and attractive due to the features of Facebook, integrating videos and sounds. Krashen (1982) noted that acquisition or learning occurs when a learner is exposed to a task that is understandable and contains i +1. 'i' is the level of language (word) the learner already knows, and the '+1' represents a metaphor for language (word knowledge aspects) that is just a step beyond that level. Other vocabulary researchers also argued that a feature of learning materials influenced learners to learn a language (Lightbown & Spada, 2013; Magnussen & Sukying, 2021; Mason & Krashen, 1997).

The third theme derived from the qualitative data analysis is 'learning challenge'. The data analyses revealed that Facebook interaction provided them with opportunities and difficulties for learning vocabulary. This could be attributed to learning challenge: engagement and self-consciousness. The opportunities for learning new words could occur from Facebook interaction. Vygotsky's theory argued that cognitive development, including vocabulary development, arose as a result of social interactions; that is, interaction facilitated students' cognitive process by allowing them to access to the lexical input through Facebook interactions. In this regard, students could notice and recognise vocabulary items/spellings of the target words during learning activity. These excerpts could provide evidence to support this claim:

> *"The content on Facebook looks more engaging than how I learn English in the classroom." (L4)*

> *"Interacting with my classmates on Facebook convinces me to learn more." (M3)*

Although Facebook provided opportunities for learners to learn novel words, shy students might seem appealing; they would be more stressed than their more outgoing peers. Facebook interaction is essential for learning vocabulary, yet these students may struggle to break out of their shells and engage in Facebook discussion. Furthermore, some respondents reported that Facebook platforms could be problematic since Internet connections could become slow or worse when it rains. The Internet could reduce or limit its speeds and make them lose their connections with classmates. These excerpts could support the claim:

> *"I found it relatively tough. I really want to engage every time a teacher had an online class. I hope to attend this kind of learning more, but I didn't because of the poor connection." (S4)*

> *"If I can choose, I will go for face-to-face learning. Online learning gave me limitations in interaction, and I prefer face-to-face interaction. The Internet connection was poor too." (M2)*

Materials could be another challenge for teachers. A small number of participants pointed out that they required a wider variety of materials and designs for learning activities. This indicates individual differences, and a wide variety of learning styles should be offered among Thai primary school students to suit their learning

preferences and stimulate productive outcomes. The findings also imply that students with different proficiency levels require teaching techniques and social interactions.

> *"Everyone was so good. They came up with the right answer, and I was uncomfortable with that if I came up with the wrong answer." (S2)*
>
> *"It was uncomfortable and irritable when the connection loss happened." (M2)*
>
> *"I felt a little embarrassed about my phone since it's a bit older than others. Sometimes, I couldn't post the answer on time." (L4)*

However, Thai primary school participants further revealed their negative perceptions of using Facebook to learn vocabulary from their self-consciousness. They reported feeling unconfident, embarrassed, and uncomfortable learning vocabulary through Facebook at some point (see excerpts above). Some had low self-esteem when others performed better than they did, and some faced connection and device issues which could make them feel somewhat uncomfortable during the learning process. The SLA theory could elaborate that individual characteristics might depend on one another. Moreover, the relationship between unique characteristics and learning environments is relatively complex, and different learners may react differently to the same learning conditions. Indeed, the current findings suggest that a learning environment with a wide variety of instructional activities needs to be created for classroom practices.

5.3 Conclusion

The current study has yielded some fruitful information on vocabulary acquisition. The quantitative results provided some evidence to support that using Facebook was an effective tool for enhancing EFL primary school learners. The study also pointed out that Facebook could be implemented as a supplemental instructional platform for vocabulary learning. In addition, the qualitative findings also showed that using Facebook to learn and develop primary school students' vocabulary knowledge was helpful. Specifically, primary school participants noted that Facebook provided a positive and enthusiastic atmosphere to acquire vocabulary items by engaging and interacting with peers in learning activities. The use of Facebook as a social platform for learning promotes vocabulary learning outside of the classroom context, which, in turn, is regarded as more pleasurable and stimulating for EFL learners. Together, the

use of Facebook is an efficient alternative mode of vocabulary teaching and learning in an EFL context.

5.4 Implications

The current study yields some pedagogical implications. First, since vocabulary is the core of any language and is essential in language learning, practitioners need to equip themselves with up-to-date technological pedagogical techniques. The current study can be helpful for language teachers at all education levels. The present study could also help practitioners with foreign language teaching, such as syllabus planners, material developers, and test developers. In addition, the current findings are also applicable to learning language skills and sub-skills, including listening, speaking, pronunciation, vocabulary, and grammar. Specifically, this study proved the effectiveness of using Facebook in enhancing vocabulary learning.

From a theoretical perspective, the current study is consistent with previous studies (e.g., Mukhlif & Challob, 2021; Salazar, 2019; Terantino & Graf, 2013) that Facebook is a valuable platform that encourages interaction and a collaborative learning environment for learning vocabulary. The quantitative findings also provide evidence to support the continuum of vocabulary learning; that is, all learners acquired the linguistic features in the same sequence, even though they progressed at different rates. Indeed, vocabulary knowledge aspects could be achieved and used by learners at different development stages. These findings support that a lexical aspect is not acquired until learners have become aware of it in the input and fully developed before they can use their vocabulary knowledge aspects (i.e., spoken and written form, word parts) already stored in their mental lexicon (Schmidt, 2001, 2010).

5.5 Limitations and recommendations

The limitations are imposed on the current study. First, the study participants chosen conveniently for the study were restricted to one government primary school in Northeastern Thailand, and this review was applied to one school only. Second, the researcher selected the target L2 words from the school textbook and compared them with the wordlist of the national curriculum because this textbook was assigned to be a curriculum textbook for grade six primary school; therefore, it was chosen as a school textbook.

Due to its limitations, the current study would suggest those willing to investigate this area of L2 vocabulary research further, especially studies on the effectiveness of using social media platforms plus deliberate learning design. First, students at other language proficiency levels are suggested, including different levels of education and various learning conditions and contexts. Second, interested researchers can investigate the effect of additional teaching and learning methods via online platforms on language skills. Third, exploring the learners' in-depth perceptions of using social media platforms in learning and teaching vocabulary using other kinds of techniques would be fruitful. Finally, more studies with heterogeneous populations may be needed to compare the differences in vocabulary improvement.
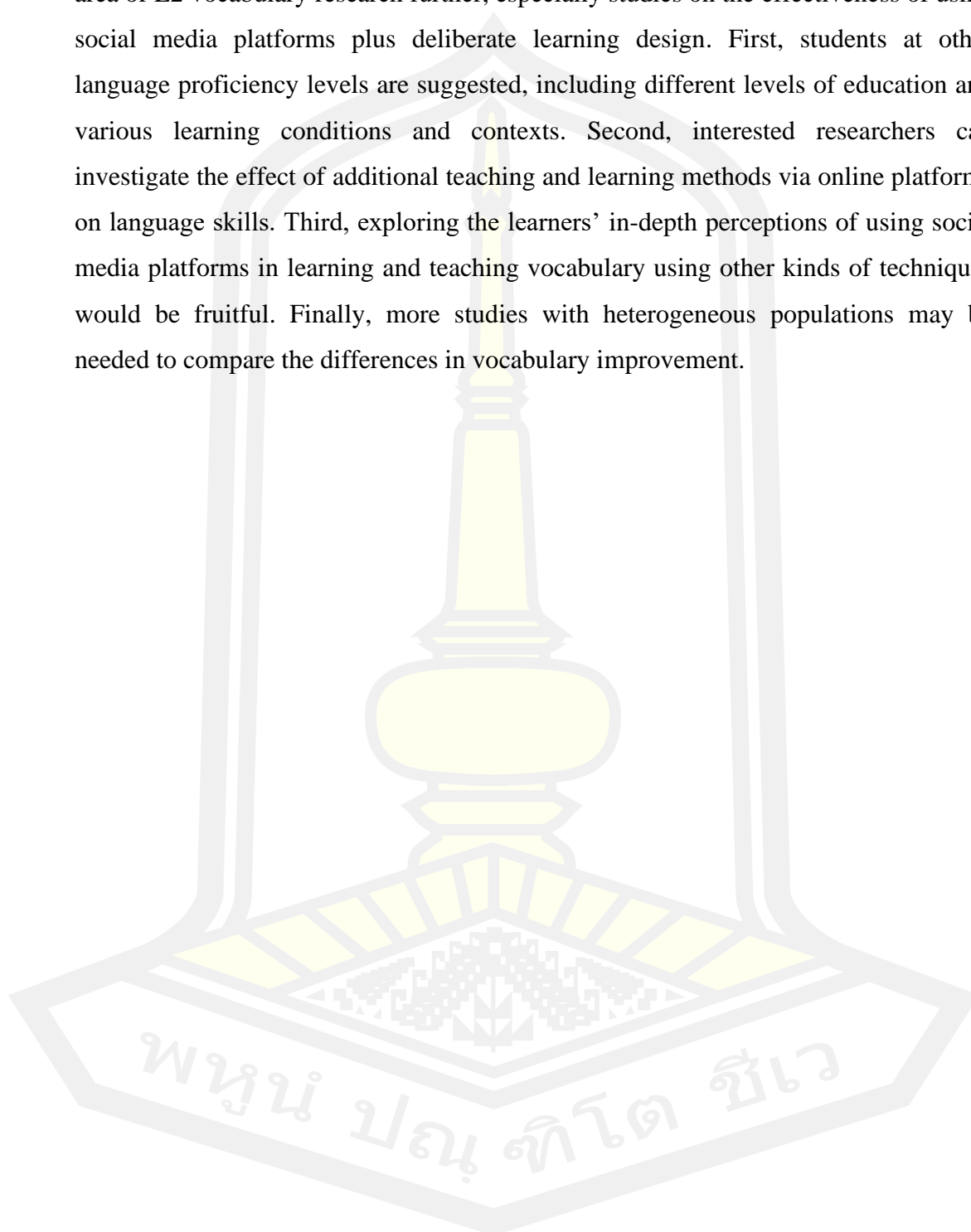
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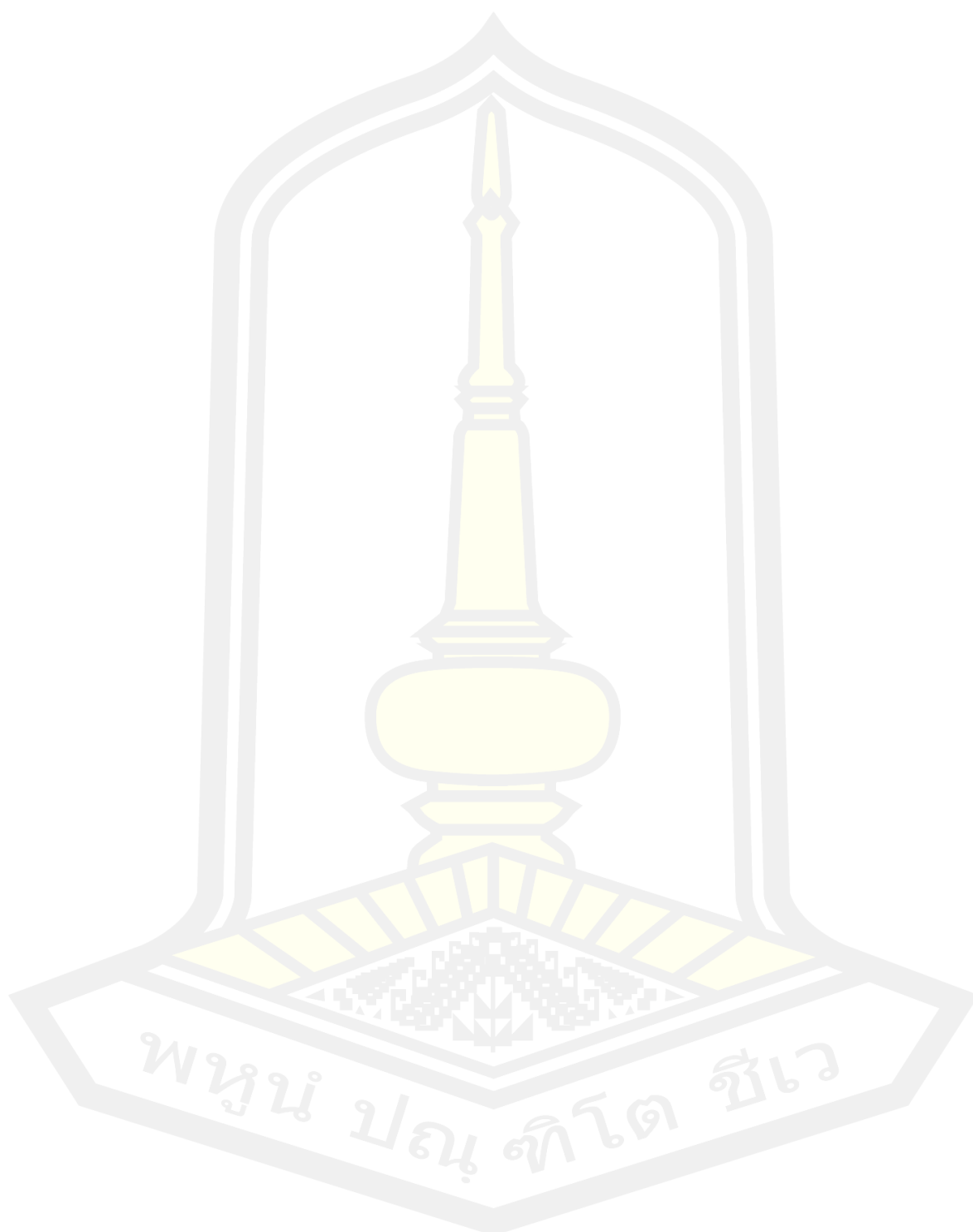
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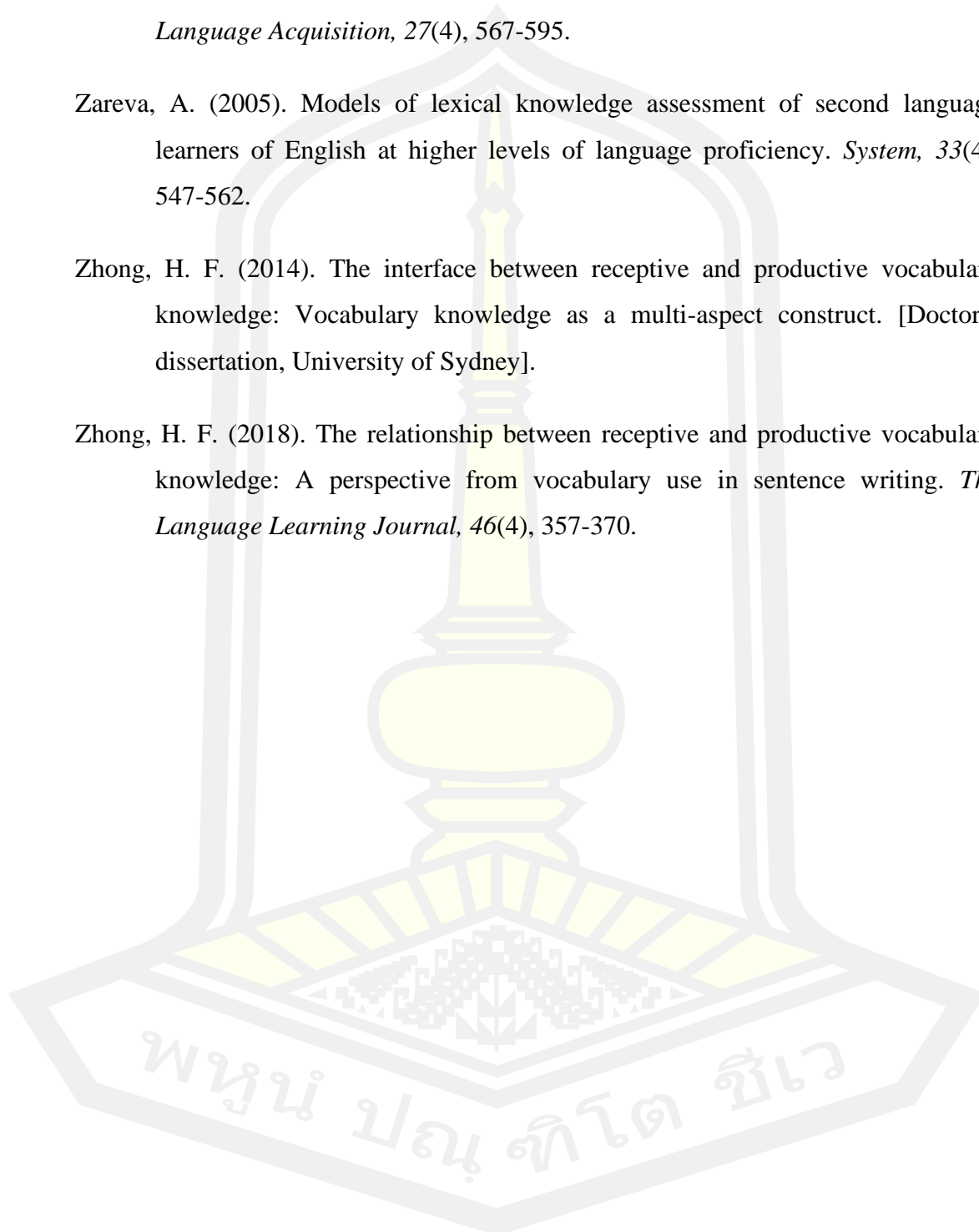
**APPENDICES**
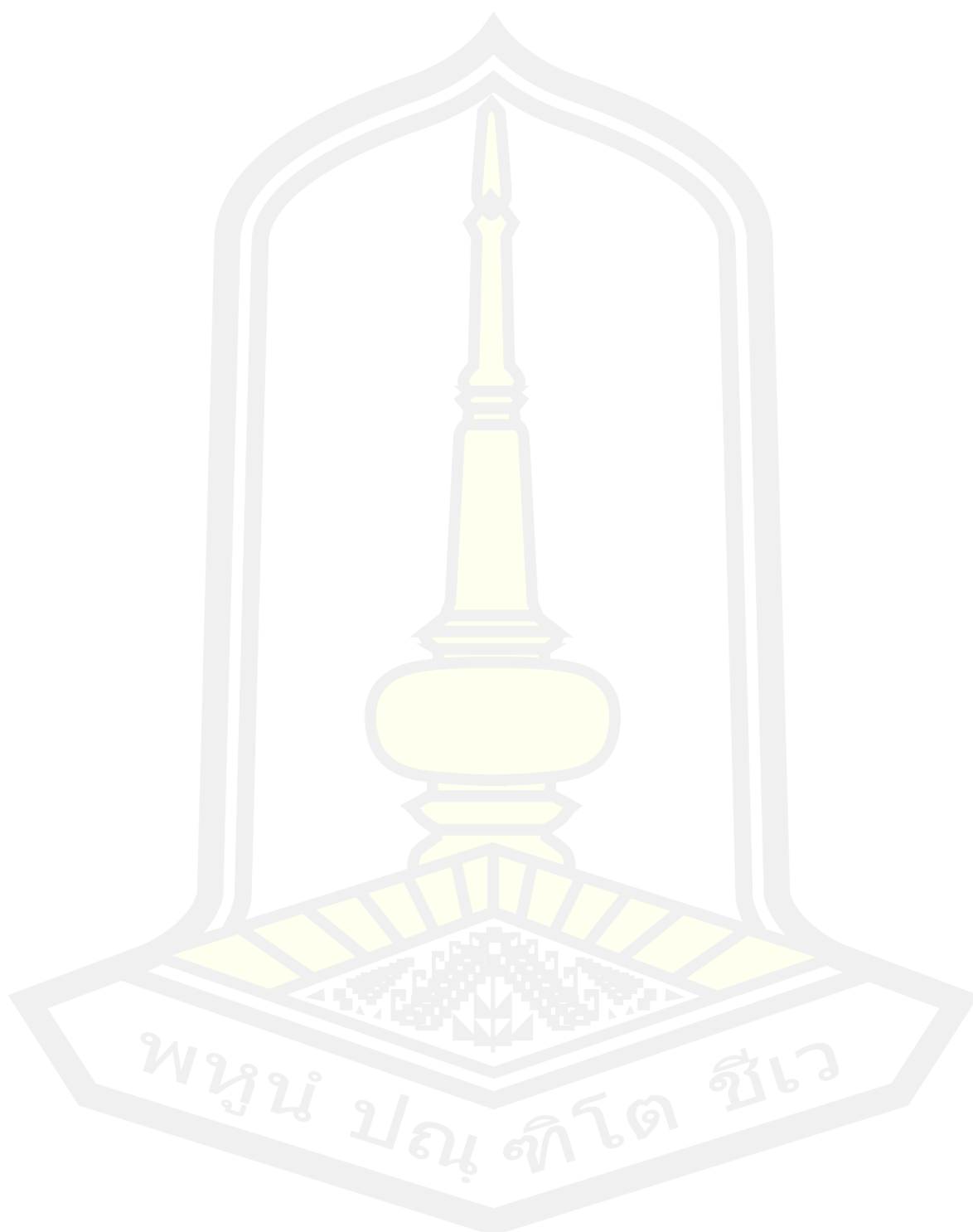
Appendix A: English Vocabulary Checklist Test

Instructions: Please mark (✓) if you know the word and write down its meaning, or mark a cross (×) if you do not know the word.

Word	Known word	Unknown word	Meaning
animal			
class			
group			
page			
meet			
see			
forget			
nobody			
radio			
television			
cook			
like			
listen			
speak			
watch			
food			
meat			
chicken			
fish			
rice			
vegetable			
milk			
coffee			
tea			

Word	Known word	Unknown word	Meaning
want			
drink			
plate			
paper			
salt			
sugar			
cake			
make			
buy			
sell			
bottle			
money			
change			
speak			
half			
piece			
thing			
address			
bank			
hospital			
station			
house			
road			
river			
doctor			
police			
live			

Word	Known word	Unknown word	Meaning
breakfast			
lunch			
dinner			
hand			
clock			
time			
begin			
arrive			
leave			
art			
science			
math			
music			
clean			
help			
study			
late			
bedroom			
car			
kitchen			
knife			
drive			
find			
ride			
use			
wear			
pull			

Word	Known word	Unknown word	Meaning
push			
report			
today			
tomorrow			
yesterday			
date			
rain			
loud			
quiet			
jump			
sick			
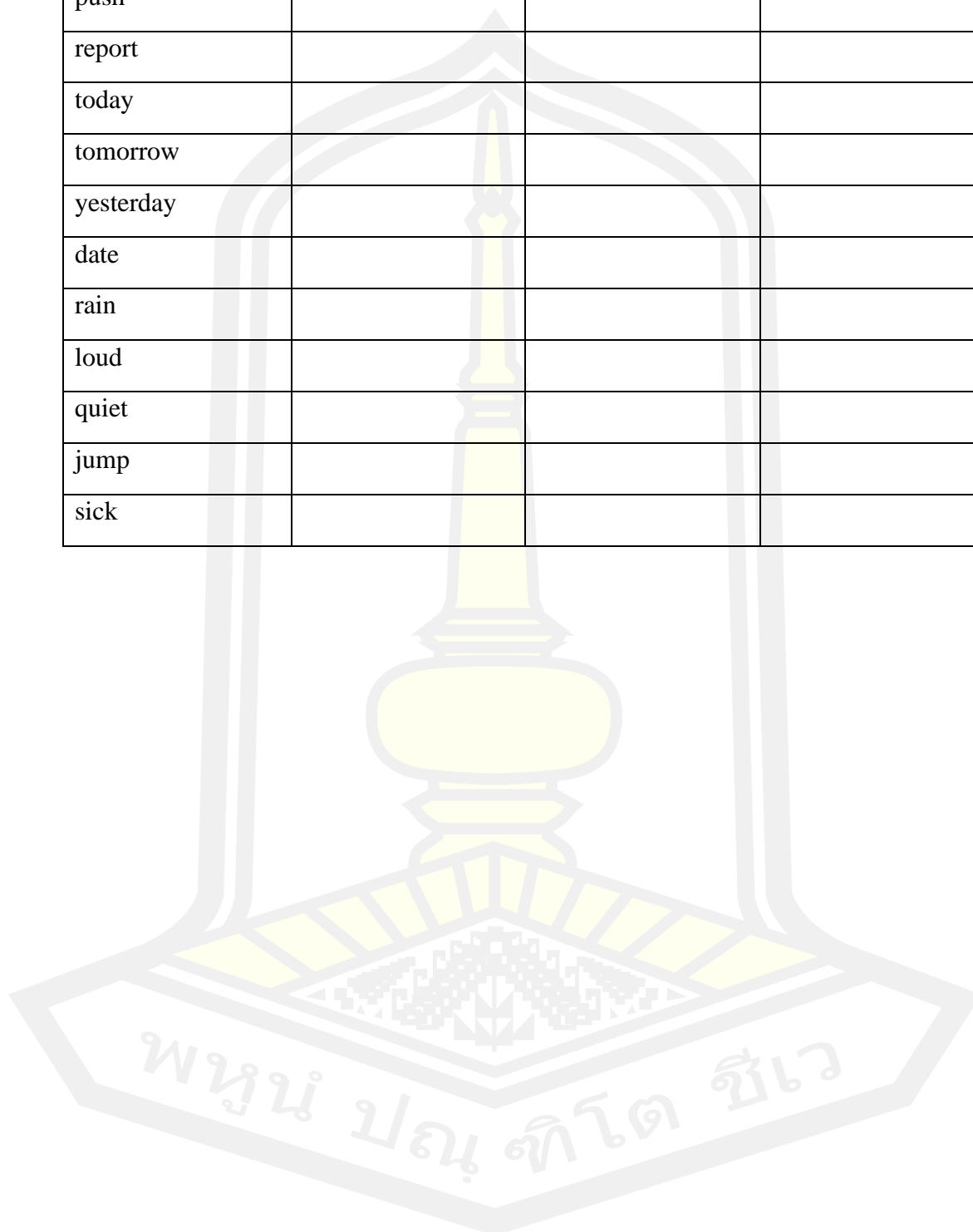
Appendix B: The Form Identification Test (FIT)

The Form Identification Test

Instructions: Please select the correct word spelling to match the image given.

คำสั่ง: ให้นักเรียนเลือกคำตอบที่สะกดถูกต้องและมีความหมายตามรูปภาพที่กำหนดให้

1.
a. animal
b. anymal
c. amnesia
d. ammonia

6.
a. see
b. sea
c. cie
d. cee

2.
a. clase
b. class
c. clash
d. clees

7.
a. hend
b. home
c. hame
d. hand

3.
a. group
b. groub
c. groom
d. grome

8.
a. treen
b. train
c. trend
d. tream

4.
a. paig
b. poak
c. pack
d. page

9.
a. redio
b. rodyo
c. radio
d. ready

5.
a. meat
b. mait
c. meet
d. meit

10.
a. television
b. talavision
c. telegram
d. talagram

The Form Identification Test

Instructions: Please select the correct word spelling to match the image given.

คำสั่ง: ให้นักเรียนเลือกคำตอบที่สะกดถูกต้องและมีความหมายตามรูปภาพที่กำหนดให้

11
a. ceek
b. cuke
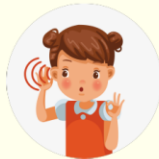c. cook
d. coke

16
a. foot
b. food
c. fote
d. fode

12
a. lite
b. lait
c. leik
d. like

17
a. meat
b. meet
c. meam
d. meem

13
a. lissen
b. lessen
c. litsin
d. listen

18
a. shicken
b. chicken
c. sicken
d. cicken

14
a. speak
b. speek
c. peaks
d. peack

19
a. rice
b. rite
c. reec
d. race

15
a. vatch
b. watch
c. volte
d. wolte

20
a. wegtable
b. wettable
c. vegetable
d. vegeitable

The Form Identification Test

Instructions: Please select the correct word spelling to match the image given.
คำสั่ง: ให้นักเรียนเลือกคำตอบที่สะกดถูกต้องและมีความหมายตามรูปภาพที่กำหนดให้

21
a. meal
b. mele
c. milk
d. mika

26
a. papee
b. paper
c. barber
d. barbor

22
a. koffie
b. kophie
c. coffee
d. cotfee

27
a. solt
b. salt
c. selt
d. sale

23
a. bling
b. blink
c. dring
d. drink

28
a. sugar
b. sukie
c. suger
d. suker

24
a. want
b. warn
c. ween
d. wont

29
a. ceek
b. coke
c. cake
d. ceke

25
a. place
b. plate
c. prece
d. prete

30
a. mank
b. meik
c. monk
d. make

Appendix C: The Form Rearranging Test (FRT)

The Form Recall Test

Instructions: Please use the given letters to spell the word in the blank to match the image given.
คำสั่ง: ให้นักเรียนสะกดคำตามจำนวน<u>ช่องว่าง</u>โดยใช้ตัวอักษรที่กำหนดให้เพื่อให้มีความหมายตามภาพที่กำหนด

ตัวอย่าง

d l o t l ❌

<u>d</u> <u>o</u> <u>l</u> <u>l</u> ✅

1. b e y u
___

2. s l e t l
_____

3. b o l t e a t l
_____

4. m n o e t n y
_____

5. p e a r s n e t
_____

6. r i t n a
_____

7. m r k a e i t
_____

8. s u t n d p e t
_____

9. t h e i n g
_____

10. n g i h d t
_____

The Form Recall Test

Instructions: Please use the given letters to spell the word in the blank to match the image given.
คำสั่ง: ให้นักเรียนสะกดคำตามจำนวน<u>ช่องว่าง</u>โดยใช้ตัวอักษรที่กำหนดให้เพื่อให้มีความหมายตามภาพที่กำหนด

11 b e n a k _ _ _ _	16 r e v i o r _ _ _ _ _
12 h o i p s n a t l _ _ _ _ _ _ _ _	17 d o t c o a r _ _ _ _ _ _
13 t e r i e _ _ _ _	18 n r u s h e _ _ _ _ _
14 h u s i o e _ _ _ _ _	19 c a i h g r _ _ _ _ _
15 b a r e c k f s a t _ _ _ _ _ _ _ _ _	20 r e a o d _ _ _ _

The Form Recall Test

No.	Image	Letters	Blank
21		l n c k u h	_ _ _ _ _ _
22		c c l o g k	_ _ _ _ _ _
23		n e n i e	_ _ _ _ _
24		s c e i c n l e	_ _ _ _ _ _ _
25		m i s s u c	_ _ _ _ _ _
26		c l a e r l n	_ _ _ _ _ _
27		k i c t s e h n	_ _ _ _ _ _ _
28		d i b v r e	_ _ _ _ _ _
29		t g p e i r	_ _ _ _ _
30		b t u e t p r	_ _ _ _ _ _

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