Utilizing Facebook Input to Enhance Vocabulary

Knowledge in Young EFL Learners

Noppadon Ponsamak¹ & Apisak Sukying¹

¹ ELT Programme, Department of Western Languages and Linguistics, Faculty of Humanities and Social Sciences, Mahasarakham University, Mahasarakham, Thailand

Correspondence: Noppadon Ponsamak, Faculty of Humanities and Social Sciences, Mahasarakham University, Mahasarakham, Thailand. E-mail: 64010181008@msu.ac.th

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Abstract

This mixed-methods study investigated the role of Facebook in enhancing Thai EFL primary school learners' vocabulary knowledge. The study's primary goal was to examine how using Facebook as an instructional platform improves the written form of English vocabulary knowledge. Twenty-four primary school students, aged 11-12, participated in this study. Two tests were designed and validated to measure students' receptive and productive knowledge of word form. A focus group was also used to gain deeper insight into students' perspectives on the impact of Facebook input on vocabulary learning. Descriptive and inferential statistics were performed to analyze quantitative data, while content analysis was used 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 along the receptive-productive continuum. Additionally, the qualitative findings showed the usefulness of Facebook input. Indeed, the participants viewed the 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. Implications for practitioners and suggestions for future studies are also provided.

Keywords: Facebook input, productive word knowledge, receptive word knowledge, word knowledge, written form of word knowledge, young EFL students

1. Introduction

Vocabulary is the core of any language and is essential to mastering a second language (L2) (Matwangsaeng & Sukying, 2023; Nation, 2022; Schmitt, 2010; Sukying, 2023; Sukying & Matwangsaeng, 2022). Indeed, Schmitt (2010) stated, "One thing that all of the partners involved in the learning process can agree upon is that learning vocabulary is an essential part of mastering a second language" (p. 4). Acquiring vocabulary is a time-consuming process in foreign language learning, during which learners become familiar with the words they come across. It has been argued that the frequency of usage and the number of exposures to various forms and contexts promote the acquisition of new vocabulary (Sukying, 2018a; Webb & Nation, 2017). Thus, language teachers may need to provide as many activities as possible to ensure learners encounter and contribute to enough real-world language environments. Yet, the learners must also feel comfortable participating in these activities to succeed in acquiring language (Krashen, 1982).

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, 2022; Schmitt, 2010; Sukying, 2018a). According to Nation (2022), word form includes spoken, written, and word parts knowledge. The aspect of word meaning includes knowledge related to form-meaning links, concepts and referents, and associations. In contrast, word use involves grammatical functions, collocations, and constraints on use. Vocabulary researchers have shown that learners must encounter vocabulary several times before the word is fully known (Schmitt, 2010). A considerable body of literature also emphasizes the close relationship between learners' language exposure and L2 acquisition (Li, Ellis & Zhu, 2019; Luque & Morgan-Short, 2021; Sukying, 2018a, 2018b). Thus, providing

more chances for learners to encounter the frequency of word exposure due to language input is essential for word form development.

In an EFL context, inadequate vocabulary knowledge remains a vital problem for most EFL learners, and Thai students are no exception. One reason might be the inadequacy of English language exposure. Indeed, L2 learners repeatedly lack opportunities to meet newly learned words in language classrooms. While new words may be presented in the class, the learners encounter few situations or opportunities to use them in real life. This could lead to inadequate vocabulary knowledge and a lack of success in L2 learning. Another issue causing the shortage of vocabulary knowledge may be the limited class time, which results in fewer chances to review the learned words. Learners typically only have three hours of English class per week. Learning vocabulary through social media may, therefore, assist learners in reviewing their vocabulary. Indeed, the lessons learned via an online platform (e.g., Facebook) may allow the learners to learn and relearn and provide more opportunities to encounter the target words.

Facebook, known for fostering social interactions and improving social presence, is a valuable tool in foreign language learning. With its extensive user base, it offers significant potential in the digital era. Teachers can leverage Facebook to share class activities, post vocabulary for review, share resources, and facilitate class discussions in English, promoting intentional vocabulary learning. Research confirms that social media, especially Facebook, enhances students' language learning experiences (Abbas et al., 2019; Al-Smadi, 2013; Flores-González et al., 2019). Utilizing Facebook as an educational platform in an English as a Foreign Language (EFL) context is ideal for fostering learning interactions efficiently.

In the Thai context, research on the impact of social media platforms on EFL primary school learners' vocabulary development is limited. Therefore, the current study aimed 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 words. It also investigated Thai EFL primary school learners' perceptions of using Facebook to improve vocabulary. The following research questions guided the study.:

(1) What impact does the use of Facebook input have on improving the vocabulary development of Thai EFL primary school students?

(2) How do Thai EFL primary school learners perceive Facebook input as a method to enhance vocabulary development?

1.1 Vocabulary Knowledge Construct

Nation (2013, 2022) introduces and elaborates upon an extensive framework for understanding vocabulary knowledge. This framework stands as the most comprehensive model for vocabulary knowledge and has garnered acceptance from various researchers in the field. This conceptualization of vocabulary knowledge dissects it into its fundamental components, encompassing 18 distinct sub-knowledge aspects. Learning vocabulary represents a continuum that spans from the reception of words, such as comprehension, to their productive use. As per Nation's (2013, 2022) framework, Form knowledge encompasses an understanding of spoken form, written form, and word parts. Meaning knowledge encompasses both form and meaning, encompassing concepts and references, as well as associations (Nation, 2013, 2022). Knowledge of use encompasses familiarity with grammatical functions, collocations, and usage constraints (Nation, 2013, 2022).

Form	1					Me	aning					Use	•				
spok	en	wri	tten	Wor	d parts		rm and aning	Conc and refere		Ass ons	ociati	ical	mmat ctions	Collo	cations	Constr on use	aints
R	Р	R	Р	R	Р	R	Р	R	Р	R	Р	R	Р	R	Р	R	Р
What does the word sound like?	How is the word pronounced?	What does the word look like?	How is the word written and spelled?	What parts are recognizable in this word?	What word parts are needed to express the meaning?	What meaning does this word form signal?	What word form can be used to express this meaning?	What is included in the concept?	What items can the concept refer to?	What other words does this make us think of?	What other words could we use instead of this one?	In what patterns does the word occur?	In what patterns must we use this word?	What words or types of words occur with this one?	What words or types of words must we use with this one?	Where, when, and how often would we expect to meet this word?	Where, when, and how often can we use this word?

Table 1. Aspects of word knowledge (Nation, 2022, p.54)

Notes: R = receptive knowledge, P = productive knowledge

The current study focuses on written form knowledge. Form knowledge refers to the ability to identify a word's phonological and morphological features 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 includes the contexts in which each word can be used and the company the word is likely to keep; for example, if a word is an adjective, a noun will generally follow it, or it follows the verb to be. If it is a noun, it will likely be preceded by an article. This also includes the knowledge that some lexical items are likely to occur together while others are not. Accordingly, a learner must understand the unique behavior of a particular word since its use may sometimes entail inappropriate grammatical functions. Therefore, a thorough perception of a word necessitates comprehending all nine aspects of word knowledge, both receptively and productively.

1.2 Vocabulary Teaching and Learning

Krashen (1989) argued that linguistic knowledge is acquired when the learner's attention focuses on the message (not form) and that only acquired knowledge is involved in authentic language use. Deliberate form-focused learning, however, results in so-called learned knowledge, which can only be used to monitor performance under certain conditions. However, it has been argued that naturalistic usage-based learning is insufficient for acquiring L2 vocabulary (Ellis, 2008). It needs to be supplemented by deliberate form-focused learning and metalinguistic teaching approaches, including those based on contrastive analysis (Yowaboot & Sukying, 2022).

Deliberate learning offers an efficient and convenient approach to memorizing vocabulary. Utilizing word lists, flashcards, and other audio-visual aids can occur beyond the language classroom, allowing learners to personalize their target vocabulary based on individual needs and goals. According to Nation (2022), individuals can retain between 30 and 100 new words per hour through bilingual word pairs. Moreover, intentional learning typically results in significantly higher retention rates when compared to incidental learning conditions (Hulstijn, 2003). However, it's important to note that vocabulary knowledge acquired through deliberate, decontextualized learning may not necessarily reach the level required for practical language use, aligning with Krashen's (1989) distinction between learning and acquisition.

According to Nation (2013), 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.

Types of processing	Types of repetition
Noticing	Seeing the same word form and simultaneously presenting 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

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

The noticing process involves a learner's attention to the given word and acknowledging it as an unknown. This means the learner needs to notice the word and be aware of it as a valuable lexical item. The learner may realize that the word has been met before but is used differently. The learner tends to decontextualize the word the moment they notice it, which, in turn, provides the foundation for a better understanding of the word. Schmidt's (2012) perceiving hypothesis also argues that noticing is a primary concept for L2 vocabulary learning.

Furthermore, the involvement load in the processing of a word plays a vital role in the quality of word acquisition and contributes to vocabulary learning (Hulstijn & Laufer, 2001). The involvement load hypothesis posits that engagement consists of three elements: "need," which pertains to whether knowledge of new vocabulary is necessary to accomplish a task; "search," which involves students' efforts to discern the meaning of unfamiliar words in the task; and "evaluation," which entails evaluating the new word concerning other words and determining its suitability in the given context.

The degree of involvement load plays a crucial role in vocabulary learning. When a vocabulary learning task (input), such as on Facebook, demands mental effort, higher involvement necessitates greater attention to the word's form. This is especially significant for tasks that require both searching and evaluating. For instance, when students search for unknown words in a dictionary during a task, they become more conscious of the word's lexical form compared to when words are simply explained. Glosses, indeed, help students remember the meaning of unfamiliar words by focusing on their meaning and/or form. In contrast, word search involves fully engaging with the task, identifying a new word in real-time based on its spelling, and selecting the appropriate meaning (evaluation).

Research in the field of vocabulary acquisition has underscored the effectiveness of intentional vocabulary instruction (Bubchaiya & Sukying, 2022; Hulstijn, 2003; Magnussen & Sukying, 2021; Sukying, 2018b; Yowaboot & Sukying, 2022). Magnussen & Sukying (2021) conducted a study to investigate whether planned learning activities involving songs and total physical response (TPR) could enhance vocabulary acquisition among preschoolers in a Thai EFL context. The results demonstrated that both singing and TPR, as well as a combination of both (TPR&S), significantly improved the participants' vocabulary acquisition. Notably, the TPR&S approach had a more pronounced positive effect on vocabulary acquisition compared to either singing or TPR alone. This suggests that when used as deliberate vocabulary learning strategies, singing and TPR effectively facilitate English vocabulary learning among young learners in EFL settings. This is in line with the findings of Yowaboot & Sukying (2022), who examined the effectiveness of digital flashcards, another deliberate vocabulary teaching approach, in enhancing the understanding of the form-meaning relationship in English vocabulary among Thai primary school children in an EFL context. The experimental group was instructed using digital flashcards, while the control group received conventional instruction. The results showed that students in the experimental group significantly outperformed those in the control group, indicating that digital flashcards, as a deliberate vocabulary teaching method, effectively promoted vocabulary learning. Furthermore, Bubchaiya & Sukying (2022) explored the impact of word parts strategy instruction on vocabulary knowledge among primary school students in a Thai EFL context. The experimental group received comprehensive training in word-part strategies, while the control group did not. The outcomes revealed that students in the experimental group performed better than those in the control group. This underscores the importance of deliberate vocabulary learning for EFL learners in expanding their vocabulary. Teachers should choose activities that incorporate deliberate learning techniques for teaching L2 vocabulary. However, it's essential to consider factors such as proficiency level, learning context, and learners' readiness when designing these activities.

In conclusion, deliberate vocabulary learning is crucial for young second language (L2) learners, as it allows them to grasp specific aspects of a word before moving on to others. Choosing words that match learners' proficiency levels, materials, and tasks is vital for the best results. Additionally, providing form-focused instructions to young L2 learners can aid in acquiring the foundational lexical knowledge necessary for future vocabulary acquisition.

1.3 Facebook as an Online Instructional Platform 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 it is one of the fastest-growing and best-known sites on the Internet. When Facebook first appeared, students mainly used the platform to keep in contact with friends (Ellison et al., 2007). Roblyer et al. (2010) also reported that students prefer communicating with teachers via Facebook rather than traditional face-to-face interaction, which may reduce immediate embarrassment and maintain a comfortable environment.

As a communicative tool in the language classroom, Facebook can promote collaboration through targeted language discussions and status updates with images or videos, comments, and questions. For example, students can discuss a photograph or video or describe a particular place, person, exercise, etc., in a foreign language while others try to guess what they are describing. Instructors can also create hypothetical events in the target language country and design a discussion around the students' anticipation before, during, and after 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 among students and between students and the instructor (Terantino & Graf, 2011).

To effectively build vocabulary through Facebook, the instructor should offer targeted vocabulary learning resources to introduce learners to specific words. This deliberate approach means that learning activities are purposefully designed. The vocabulary-related tasks conducted on Facebook can serve as an intended platform for vocabulary acquisition. Sharing educational content such as texts, images, and videos in a closed Facebook group and having learners see, hear, and write as per instructions can be considered a deliberate vocabulary learning method. This approach has the potential to enhance vocabulary acquisition among Thai EFL primary school students, as research suggests that deliberate language learning is often more effective than incidental learning (Ahmad, 2012). This study aimed to improve the vocabulary of Thai EFL primary school learners using Facebook and explored their perceptions of this method for vocabulary enhancement.

2. Method

2.1 Participants

The study included 24 primary-school-level participants at a well-established government school in northeastern Thailand. There were 11 fifth-grade participants and 13 sixth-grade participants. The participants' age was between 11 and 12, and all participants were native Thai speakers. All participants had learned English as a foreign language and received English lessons for at least two years of systematic schooling. Their English proficiency is at A1 level or below.

2.2 Research Tools

Two tests were reviewed and validated by three experts in English education (items 0.5-1). The 30 primary school students also conducted the reliability of the tests. All items of all tests were then verified to be suitable for measuring (all difficulty values = 0.2-0.8; all discrimination values = 0.2-1). All Cronbach's α values were also ≥ 0.75 .

2.2.1 The Form Identification Test

The Form Identification Test (FIT), formulated based on Laufer and Goldstein (2004) and Sukying and Nontasee (2022), was utilized to evaluate the receptive knowledge of written word forms among primary school participants. Tailored to the primary school level, the test required selecting correctly spelled target words matching the meaning conveyed by a provided image. Each item featured one target word, with one correct form, one existing word, and two pseudo-words as distractors, mimicking the target words in pronunciation and spelling. While participants could potentially guess, this task was chosen to assess receptive word form knowledge exclusively. The 30-question test awarded one point per correct answer, with a maximum score of 30, completed within a 60-minute. Table 3 illustrates an example from the FIT.

Table 3. Example of the form identification test (FIT)

Directions	Directions: Please select the correct word spelling to match the image given.										
Answer	Image	Item	Alternativ	res			Point				
(a)	Å	1.	a. hand	b. home	c. hame	d. hend	1				
(b)	പ്	2.	a. lite	b. ligh	c. leik	d. like	0				

2.2.2 The Form Recall Test

Based on Laufer and Goldstein (2004) and Sukying and Nontasee (2022), the Form Recall Test (FRT) was employed to assess the productive knowledge of written word forms, particularly word spelling. This 30-item test required participants to generate the correct form by identifying and correcting a misspelled target word, which included an additional letter. The FRT aimed to evaluate the participant's ability to recall and produce the word correctly in its form to match the meaning based on the provided image. All target words were presented in derivative forms to prevent recognition of knowledge from other tests. Points were not awarded for blank or more than two incorrect letter positions, while one point was given for less than two incorrect letter positions (indicating partial knowledge), and two points for a fully correct response. The participant's raw score was divided by two to make the possible full score 30 (60/2). Participants had 60 minutes to complete the test. An example from the FRT is illustrated in Table 4.

Two tests (FIT & FRT) were assessed and validated by three English education experts (items 0.5-1). The reliability of the tests was confirmed by 30 primary school students. All test items were found to be appropriate for measurement, with difficulty values ranging from 0.2 to 0.8 and discrimination values from 0.2 to 1. Furthermore, all Cronbach's α values exceeded 0.75.

Table 4. Example of the form recall test (FRT)

Directions: Please use the given letters to spell the word in the blank to match the image given.								
Image	Target word	Answer	Points					
Ŷ	1.terie	t r e e	2					
٥	2. b e l t o a t l	b o t e t a] 1					
	3. h u s i o e	s h o i e	0					

2.2.3 Focus Group

A focus group was used to investigate learners' perceptions of using Facebook to support their English language learning, particularly their form-focused vocabulary knowledge. The interview took place after the post-test. The questions in the focus-group interview were asked in the participants' mother tongue to avoid misunderstanding or confusion. Twelve representative participants were selected for the focus-group interview. 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, 2018a). All the questions were open-ended, and data were analyzed using content analysis.

2.3 Target Word Selection

One hundred thirty content words were keenly selected from chapter 1 to chapter 9 of the participant's English 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's (2013) New General Service List (NGSL), which lists the essential high frequency of 2,818 words for L2 learners. To ensure high-frequency and valuable word selection, we cross-referenced the words with the NGSL, resulting in 91 words. These words were tested by participants using an English vocabulary checklist (See Table 5.) within a 50-minute time limit, excluding known words. The top 80 unfamiliar words from this test were chosen for the treatment. These selections were further evaluated by a panel of experts, ultimately finalizing 80 target words for the main study.

Directions: Mark / if you know or do not know the word given. Write the meaning in Thai if known.									
Word	WordKnown wordMeaning (if known)								
animal									
group									
meet									

2.4 Facebook Input (Tasks)

The Facebook activities were meticulously crafted to enhance participants' grasp of the written form of words. Aligned with Nation's (2013) written form-focused activities—specifically, spelling rules input, word dictation, and incorporating Nation's (2013, 2022) three cognitive processes—the teacher designed tasks that required learners to watch posted videos and provide comments, demonstrating comprehension. Functioning as the facilitator in the Facebook closed group, the teacher actively encouraged participants to engage with the content and with each other. Throughout the course, the facilitator ensured sustained involvement by monitoring comment sections, verifying participants' presence, and presenting a leaderboard showcasing the most active participants based on their combined accuracy and speed in each stage. The learning process entailed four tasks, each featuring six input posts per period (three learning periods weekly). This structure aimed to expose participants to various words, exceeding six targeted words per period, as outlined in Table 6.

Stage	Input/Materials (Six posts/period)
1) Spelling rules input	a few target alphabets and their sounds (One post/period)
2) Understanding check	the word with choices of the L1 equivalent pronunciation and image (Two posts/period)
3) Receptive form-knowledge task	the pronunciation sound and the image with four alternatives of words provided (Two posts/period)
4) Productive form-knowledge task	the incomplete word spelling with the image and the pronunciation sound (One post/period)

Table 6. Tasks conducted on Facebook during one learning period

2.4.1 Spelling Rules Input

In the initial phase of Facebook group-based learning, the teacher began by welcoming all participants and confirming their readiness. Attendance was monitored through comments before and after the class. Following this, the teacher provided a brief instructional video introducing specific letters and their corresponding sounds according to Phonics. Students were required to pay close attention to the video to complete the assigned task.

2.4.2 Understanding Check

To ensure their understanding, images created by the researcher containing a word formed using the previously presented alphabet with three choices of the equivalent L1 word, representing its pronunciation, were posted. The learners were requested to select the correct answer by posting it in the comment section. The teacher could see if the participants paid attention to the previous post.

2.4.3 Receptive Form-knowledge Task

In the following phase, two brief videos were posted, each featuring two specific words with their corresponding sounds. These videos presented three choices of words, and learners had to choose the correct word that matched the sound. It was emphasized that learners had unlimited access to the video. Once more, learners had to actively listen to the pronunciation sound and identify the correct word form.

2.4.4 Productive Form-knowledge Task

Two videos were uploaded, each featuring two target words with incomplete spellings and pronunciation. Learners listened and then typed the complete words in the comments. The activity promoted careful listening, attention to spelling, and word production accuracy. After each lesson, the researcher posted discussion prompts and had participants type the learned words in a row. Attendance was noted, and a points leaderboard was shared in the Facebook group for motivation.

2.5 Data Collection Procedures

The data collection procedure was completed over two months. The participants were given a vocabulary checklist test in the first week. Based on the vocabulary checklist test results, the 100 most common unknown words were identified as the vocabulary to be taught during the experimental period.

The participants were required to complete the FIT and FRT. 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 their form-focused vocabulary knowledge. Table 7 illustrates the research procedures of the present study.

Table 7.	Data	collection	procedures
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Period	Procedure
Week: 1	Vocabulary checklist & Pre-test (FIT & FRT)
Week: 2-8	Facebook input (Treatment phase)
Week: 9	Post-test (FIT & FRT)
Week: 10	Focus group

2.6 Data Analysis

The pre-and post-test scores were initially analyzed using descriptive statistics, which included calculating the mean (M) and standard deviation (S.D.). Subsequently, inferential statistics and *t*-tests were employed to determine whether the test scores exhibited statistically significant changes.

A content analysis approach was utilized to evaluate the data from the focus group. The focus group discussions were recorded, transcribed, and then subjected to content analysis. This method involved identifying specific words, themes, or concepts within the transcribed text and quantifying their presence, meanings, and relationships.

3. Results

3.1 Influence of Facebook Input on Written Form of Word Knowledge

Table 8 summarizes Thai EFL primary school learners' test performance scores on the 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 post-tests, participants scored 13.08 (43.6%) on the FIT and 9.45 (31.6%) on the FRT.

Table 8. A summary	v of students'	performance on rece	ptive and pr	roductive written	form knowledge
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Testa	Pre-test			Post-tes	t	t value	4	
Tests	x	%	S.D.	x	%	S.D.	t-value	a
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-sample t-test revealed that pre-and post-test scores were 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-sample t-test also revealed a statistically significant difference between the receptive test (FIT) and productive knowledge (FRT) at the pre-test (t = 8.66, p < 0.05, d = 0.73) and post-test (t = 6.92, p < 0.05, d = 0.71). All effect sizes were large. This finding suggests that receptive vocabulary knowledge is acquired before productive knowledge. Overall, the results suggest that Facebook input improves Thai EFL primary school students' vocabulary development in both receptive and productive knowledge. The overall performance is shown in Figure 1.

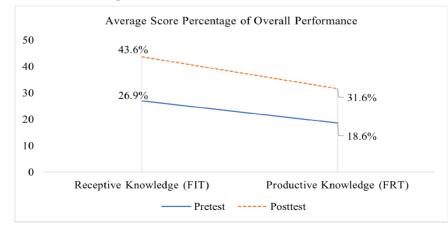


Figure 1. The summary results of test score mean's percentage of overall performance

3.2 Participants' Perception

The current study described student perceptions as socially constructed representations, which reflect their behaviors and feelings while learning vocabulary through Facebook. Table 9 illustrates the salient themes derived from the qualitative data.

Table 9. 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. Discussion

4.1 The Enhancement of the Written Form of Word Knowledge Using Facebook

This study aimed to assess the impact of Facebook on Thai EFL primary school students' vocabulary development. Considering Facebook as a communicative tool in language learning, the hypothesis suggested it enhances vocabulary learning. The Form Identification Test (FIT) and Form Recall Test (FRT) were employed. Results demonstrated significant positive effects on both receptive and productive vocabulary knowledge among Thai primary school students, contradicting prior studies (Salazar, 2019; Terantino & Graf, 2013). The findings underscore Facebook's potential as a valuable platform for effective vocabulary learning in EFL contexts.

The improved knowledge of word forms could be attributed to cognitive processes integral to vocabulary learning, specifically the mechanisms of noticing, retrieval, and creative use, as outlined by Nation (2013, 2022). The prescribed activities for teaching written vocabulary, such as spelling rules input and word dictation, require learners to actively engage in the learning process. Learners must pay close attention to the target L2 word during spelling rule input. The study implemented these principles through content videos on Facebook, incorporating text, images, and sounds, where participants were prompted to provide productive spellings as responses. The accessibility of content videos on Facebook was unlimited, allowing learners repeated exposure to target words. The noticing process during spelling rule input and the subsequent retrieval through word dictation contribute significantly to solidifying word spellings in the learners' memory. The frequency of retrieval throughout the learning process enhances the likelihood of the target word becoming deeply ingrained in memory. Deliberate learning through Facebook, with its multimedia content and interactive features, fulfilled the requirements of effective vocabulary learning. The teacher facilitated further application by encouraging learners to post their learned words on Facebook even after class, promoting the utilization of vocabulary in decontextualized settings indicative of the learners' proficiency levels. The study aligns with the effectiveness of explicit vocabulary learning efforts, as advocated by Nation and Meara (2010). It also resonates with prior research highlighting the impact of repetition and retrieval in extending the meanings of L2 words, ultimately aiding learners in comprehending various senses of encountered words (Hulstijn & Laufer, 2001; Magnussen & Sukying, 2021; Yowaboot & Sukying, 2022). In summary, the research underscores the efficacy of Facebook as an instructional platform for vocabulary learning and teaching, capitalizing on cognitive processes and deliberate learning strategies.

The gains in vocabulary knowledge could be linked to Craik and Lockhart's (1972) levels of processing, emphasizing that heightened engagement and control over new vocabulary enhance recognition and learning. Hulstijn and Laufer (2001) contribute three key elements to vocabulary acquisition: need, search, and evaluation. "Need" reflects intrinsic motivation for understanding specific aspects of a word, "search" involves actively seeking information, and "evaluation" includes assessing the word's fit within a context. The study supports the depth of processing concept, revealing that students in a Facebook group exhibited more efficient recognition of target words, as evidenced by improved knowledge measures. This aligns with Hulstijn and Laufer's hypothesis that increased involvement leads to greater vocabulary gains. The findings also confirm that tasks with more

need, search, and evaluation elements are more effective (Ellis & He, 1999; Laufer & Goldstein, 2004; Laufer & Hulstijn, 2001).

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 (See Table 8). The following section will discuss the qualitative findings based on focus group information to see students' perceptions about learning vocabulary through Facebook.

4.2 Participants' Perceptions of Instructional Intervention

The focus group participants reported that Facebook input promoted enthusiasm. More specifically, Facebook made learning feel attractive, supportive, and inviting. This perception could be attributed to the learning atmosphere, given that Facebook might provide students with ample opportunities for vocabulary learning and retrieval. The Facebook features also helped them be attracted to the learning process, allowing them to successfully pick up new words and efficiently recognize them when needed. Moreover, using Facebook with images and sounds in vocabulary learning provides an engaging atmosphere that captures students' interest and makes vocabulary learning more enjoyable. In addition, due to Facebook features, such as pictorial techniques and online learning modes, students were provided with more opportunities for active learning and were motivated to engage in learning activities. 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 from the focus group support these claims:

"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 helped remember vocabulary." (L2)

The participants also perceived Facebook input as 'competitive'. This could be because students were allowed to be awarded a 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 to win an activity. These excerpts support this 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 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 suitable platform for vocabulary learning as it creates enthusiasm and competitiveness among Thai primary school participants.

Concerning 'content delivery', the qualitative data analyses showed that Facebook input 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, including its structure and materials. Facebook provided well-organized linguistic features and materials for learning target words. Prearranged materials were provided for learning the target words, allowing students to learn vocabulary items outside of classrooms. The following excerpts support these findings:

"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, the content seemed to emphasize word choices. The well-organized presentation structure effectively directed students' attention to vocabulary items, enhancing memorization and learning. The materials shared on Facebook were not only comprehensible but also attractive. Krashen (1982) highlighted that acquisition or learning happens when learners encounter tasks that are understandable and slightly beyond their current language level (i + 1). The 'i' represents the language level already known, and the '+1' denotes the next step in language knowledge. Vocabulary researchers, including Lightbown and Spada (2013) and Magnussen &

Sukying (2021), argue that the nature of learning materials can significantly impact the language learning experience.

The third identified theme from qualitative data analysis is the 'learning challenge.' Analysis indicated that Facebook presented students with both opportunities and challenges in vocabulary learning. While students acknowledged numerous learning opportunities on the platform, they also reported occasional feelings of self-consciousness. Drawing on Vygotsky's theory, which emphasizes cognitive development through social interactions, the study found that interaction acted as a catalyst for students' cognitive processes. This facilitated access to lexical input during their interactions on Facebook, allowing students to observe and identify vocabulary items and correct spellings of target words during their learning activities. These excerpts provide substantiating evidence for this assertion:

"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 provides opportunities for learners to acquire novel words, shy students might be more stressed than their more outgoing peers. Facebook 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, causing the students to lose some interactions with classmates. This is illustrated in the statements below:

"I found it relatively tough. I want to engage every time a teacher has 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 few participants indicated they required various materials and designs for learning activities. This shows individual differences and a wide variety of learning styles should be offered to Thai primary school students to suit their learning preferences and promote productive outcomes. The findings also indicate that students with different proficiency levels require different 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)

Certainly, some Thai primary school participants expressed negative perceptions of using Facebook for vocabulary learning, primarily due to feelings of self-consciousness. Instances were reported where participants felt lacking in confidence, experienced embarrassment and felt discomfort during the learning process on Facebook (refer to provided excerpts). Some participants struggled with low self-esteem when comparing their performance to others, while others faced connectivity and device issues, contributing to a sense of discomfort. In line with Second Language Acquisition (SLA) theory, individual characteristics play a crucial role in the learning process, and the relationship between unique traits and learning environments is intricate. The findings underscore the importance of creating diverse instructional activities in the classroom to accommodate different learner reactions to varying learning conditions.

5. Conclusion

The current study has yielded valuable insights into vocabulary acquisition. Quantitative results offer evidence that the use of Facebook enhances the vocabulary of EFL primary school learners, suggesting its potential as a supplemental instructional platform. Qualitative findings reinforce this, highlighting Facebook's utility in creating a positive and enthusiastic atmosphere for primary school students to learn and develop vocabulary. Participants noted that the platform's interactive nature facilitated peer engagement during learning activities. Utilizing Facebook as a social platform for learning extends vocabulary acquisition beyond the classroom, providing a more enjoyable and stimulating experience for EFL learners. These results collectively affirm that Facebook is an effective alternative for teaching and learning vocabulary in an EFL context.

6. Limitations and Recommendations

It is important to note that the study's participants were selected through convenience sampling, limiting the sample to one government primary school in Northeastern Thailand. Additionally, the target L2 words were drawn from the grade six curriculum textbook, potentially impacting the generalizability of the results. Future research could benefit from including students at various language proficiency levels, across different educational levels, and in diverse learning conditions and contexts. Exploring the effects of additional teaching and learning methods via online platforms on language skills and delving into learners' in-depth perceptions of using social media platforms for vocabulary learning with alternative methods would be beneficial. Moreover, studies involving more heterogeneous populations may be necessary to compare variations in vocabulary improvement resulting from the use of social media platforms for vocabulary learning.

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