THE DEVELOPMENT OF LEARNING ACTIVITY USING KWL PLUS TO PROMOTE THAI READING AND WRITING ABILITIES FOR VIETNAMESE STUDENTS

MISS VU THANH HANG

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ABSTRACT

The purposes of this research were: 1) to develop Thai reading and writing abilities of Vietnamese students through the use of KWL Plus learning activities based on the 70 percent criterion; and 2) to study the learning achievement of Vietnamese students after participating in KWL Plus-based learning activities. The target group consisted of 6 Vietnamese students who were beginner-level Thai learners and lacked formal knowledge of Thai reading and writing. This research employed classroom action research divided into 3 action cycles. The research instruments included: 1) KWL Plus-based lesson plans, 2) Thai reading ability tests, 3) Thai writing ability tests, 4) behavioral observation forms, 5) teaching reflection records, and 6) student interviews. The data were analyzed using percentage (%), mean ($\overline{X}$), and standard deviation ($S.D.$).

The research findings were as follows: 1) The Vietnamese students' Thai reading and writing abilities improved through the use of KWL Plus learning activities across the three action cycles. In Action Cycle 1, the students achieved an average score of 58.67 out of 70 points, accounting for 83.81 percent ($S.D.$=4.57), which was at the Good level. Two students achieved the Excellent level, while four students achieved the Good level. In Action Cycle 2, the average score increased to 62.67 out of 70 points, accounting for 89.53 percent ($S.D.$=4.91), which was at the Excellent level. Four students achieved the Excellent level, while two students achieved the Good level. In Action Cycle 3, the students achieved an average score of 61.50 out of 70 points, accounting for 87.86 percent ($S.D.$=7.59), which was also at the Excellent level. Three students achieved the Excellent level, while three students achieved the Good level. The findings indicated that the KWL Plus learning activities effectively promoted students' Thai reading and writing abilities throughout the three action cycles. 2) The learning achievement of Vietnamese students after participating in KWL Plus learning activities was higher than the 70 percent

criterion. The students achieved an average score of 89.17 out of 100 points, accounting for 89.17 percent (*S.D.*=5.08), which was at the Excellent level. Four students achieved the Excellent level, while two students achieved the Good level. These results demonstrated that the KWL Plus learning activities were highly effective in improving Thai reading and writing achievement among Vietnamese students.

Keywords: Thai reading and writing abilities, KWL Plus, Learning achievement, Vietnamese students, Action research

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CHAPTER 1
INTRODUCTION

1.1 Background and Significance of the Problem

In recent years, the expansion of economic, educational, and cultural cooperation between Thailand and Vietnam has led to a growing demand for Thai language proficiency among Vietnamese learners. Thai is increasingly used by Vietnamese students for academic study, employment, tourism, and cross-border business communication. As a result, Thai language education for Vietnamese learners has gained considerable importance, particularly at the beginner level where foundational reading and writing skills play a decisive role in long-term language development (Baker & Jones, 2019, Kirkpatrick, 2020).

However, Thai is widely recognized as a linguistically complex language for foreign learners, especially for Vietnamese students whose first language uses the Latin alphabet and differs significantly from Thai in terms of writing system, phonology, and orthographic principles. Thai employs an abugida writing system with 44 consonants, multiple vowel symbols that can appear before, after, above, or below consonants, three consonant classes, final consonant rules, tone marks, and numerous special reading conventions derived from Pali and Sanskrit. These characteristics pose substantial challenges for Vietnamese beginners, particularly in the development of accurate reading and writing abilities (Smyth, 2015, Prasithrathsint, 2018).

Previous studies and teaching practices have shown that many Vietnamese learners experience serious difficulties at the initial stage of Thai literacy acquisition. Common problems include confusion among consonant classes, incorrect pronunciation caused by unfamiliar tone rules, misreading of vowels and final consonants, and an inability to apply reading rules consistently when encountering new words. These difficulties often result in slow reading speed, low accuracy, decreased confidence, and high levels of anxiety toward Thai script (Nguyen, 2017, Wongsothorn, 2019). In many cases, learners resort to rote memorization without meaningful understanding, which negatively affects both reading comprehension and writing accuracy.

In addition, the rapid growth of online learning environments has transformed the way foreign languages are taught and learned. Online Thai language courses have become increasingly popular among Vietnamese students due to their flexibility and accessibility. Nevertheless, many existing online Thai courses still rely heavily on teacher-centered instruction, mechanical drills, and one-way content delivery. Such approaches often fail to activate learners' prior knowledge, promote metacognitive awareness, or encourage learners to reflect on their learning processes (Anderson, 2018; Moore & Kearsley, 2020). Consequently, students may complete lessons without developing a clear understanding of how Thai reading and writing systems function as an integrated whole.

From an educational perspective, developing effective learning activities that support beginner learners in systematically constructing knowledge of Thai reading and writing rules is essential. Contemporary learning theories emphasize the importance of learner-centered approaches that encourage active engagement, self-monitoring, and reflection (Bransford, Brown, & Cocking, 2000). One instructional strategy that aligns well with these principles is the KWL Plus strategy. KWL Plus is an extension of the traditional KWL framework, consisting of four components: what learners already Know (K), what they Want to know (W), what they have Learned (L), and the Plus component, which involves summarizing, organizing, or mapping newly acquired knowledge (Ogle, 1986, Carr & Ogle, 1987).

Applying KWL Plus to Thai language instruction offers significant potential benefits, particularly for Vietnamese beginners learning Thai reading and writing. By activating learners' prior linguistic knowledge, encouraging them to set clear learning goals, and guiding them to reflect on newly learned reading rules and writing patterns, KWL Plus can help learners build a deeper and more systematic understanding of Thai orthography. Moreover, the Plus component allows learners to organize complex reading rules-such as consonant classes, vowel positions, tone rules, final consonants, and special reading cases-into meaningful structures, thereby reducing cognitive overload and enhancing retention (Pressley & Afflerbach, 1995, Fisher, Frey, & Lapp, 2011).

Despite the recognized advantages of KWL Plus, existing research has largely focused on its application in first-language literacy or general reading comprehension contexts. There is still a lack of empirical research examining the systematic use of KWL Plus in foreign language contexts, particularly in teaching Thai reading and writing to Vietnamese students at the beginner level. Furthermore, few studies have explored how

KWL Plus can be integrated into structured online learning activities that address the unique linguistic challenges of Thai script (Alhaqbani & Riazi, 2012, Grabe & Stoller, 2020).

Therefore, there is a clear need to develop and examine learning activities that combine an effective instructional strategy with a carefully sequenced content structure for Thai literacy instruction. Developing learning activities using KWL Plus specifically designed to promote Thai reading and writing abilities among Vietnamese students not only addresses learners' immediate difficulties but also contributes to the broader field of Thai language education as a foreign language. Such development can provide a practical instructional model for teachers, enhance learning outcomes for students, and offer empirical evidence to support the use of metacognitive learning strategies in online Thai language instruction.

As mentioned above, the importance of this study lies in responding to the increasing demand for Thai language skills among Vietnamese learners. To address the difficulties in reading and writing Thai at the beginner level, the researchers are interested in integrating the KWL Plus learning technique into creative online learning activities. This aims to develop a student-centered teaching approach that promotes the development of Thai reading and writing skills, emphasizing systematic practice to maximize self-directed learning and expanding the scope of academic research on effective teaching strategies for Thai as a foreign language, enabling learners to apply the knowledge appropriately.

1.2 Research objectives

1.2.1 To develop learning activities using the KWL Plus technique to promote Thai reading and writing abilities of Vietnamese students.

1.2.2 Study of Thai reading and writing achievement of Vietnamese students after participating in learning activities using the KWL Plus technique, achieving a score of 70% or higher.

1.3 Scope of Study

1.3.1 The target group

The target group is a Vietnamese classroom with 6 Vietnamese students who are beginner-level Thai learners, determined by the criterion that they lack formal Thai reading and writing knowledge. And are willing to participate in online learning activities using the KWL Plus strategy throughout the duration of their studies.

1.3.2 Variables in the Study

1.3.2.1 The independent variable is the online learning activities using the KWL Plus technique designed to promote Thai reading and writing skills among Vietnamese students.

1.3.2.2 The dependent variable is the Thai reading and writing achievement of Vietnamese students.

1.3.3 Content

The content of this study is limited to the development and implementation of online learning activities based on the KWL Plus strategy, covering 12 structured lessons designed to promote Thai reading and writing abilities for Vietnamese students at the beginner level. Each lesson is organized systematically from basic to complex reading and writing principles, consisting of 12 lesson plans, 24 hours for 3 cycles of research procedures, with the following details:

Lesson 1: Thai consonants and the three consonant classes (2 hours)

Lesson 2: Vowels and their positions (2 hours)

Lesson 3: Reading initial consonants with vowels (2 hours)

Lesson 4: Final consonants and vowel modifications (2 hours)

Lesson 5: Reading with final consonants (2 hours)

Lesson 6: Tones in Thai and reading with tone marks (2 hours)

Lesson 7: Leading consonants (2 hours)

Lesson 8: Consonant clusters (2 hours)

Lesson 9: Reading with double ร, words using the vowel “ใ”, and other special cases (2 hours)

Lesson 10: Marks in Thai (2 hours)

Lesson 11: How to read words with ฤ and how to read words with ฑ (2 hours)

Lesson 12: Pali and Sanskrit languages (2 hours)

1.3.4 Study Period

On March-April 2026. The study is conducted within the period specified in the research plan and implemented through an online instructional format. Learning activities take place via Zoom Workplace, with students participating in the lessons developed by the researcher.

1.4 Definitions

KWL Plus learning activities refer to the teaching activities designed using the KWL Plus strategy to support the development of Thai reading and writing skills among Vietnamese students are a student-centered approach that encourages active student participation in the learning process. These activities were systematically integrated into online Thai language lessons to help students understand and effectively apply Thai reading and writing rules. They emphasized stimulating students' prior knowledge, setting clear learning objectives, monitoring understanding during learning, and synthesizing reading and writing rules after instruction. Additional components included activities such as summarizing reading rules, tables, or structured notes on consonants, vowels, tonal rules, and special reading cases in Thai. The learning activities were organized into four steps:

1. Know (K) stage: This stage involved eliciting learners' prior knowledge related to Thai sounds, letters, or reading experiences. Teachers guided students to recall and express what they already knew about Thai reading and writing before beginning each lesson.

2. Want to Know (W) stage: In this stage, students identified what they wanted to learn from the lesson, such as specific reading rules, pronunciation patterns, or writing forms. This stage aimed to stimulate curiosity and set clear learning goals.

3. Learned (L) stage: This stage focused on students' reflection on what they had learned after completing the lesson activities. Learners summarized newly acquired knowledge related to Thai reading and writing rules and compared it with their initial understanding.

4. Plus stage: The Plus stage is an enrichment phase in which learners systematically organize the knowledge they have acquired through additional activities, such as summarizing information in tables, practicing reading aloud and writing

vocabulary, or applying their knowledge to reading and writing Thai in various contexts. This stage aims to enhance learners' deep and sustained understanding of the content.

Thai reading and writing achievement refers to measure the reading and writing abilities of Vietnamese students in Thai after participating in the KWL Plus learning activities, an achievement test consisting of two parts was used: Part 1 assessed reading ability using 46 multiple-choice questions (46 points), and Part 2 assessed writing ability using 6 essay questions (54 points). A writing assessment form was then used to grade the scores. The total score for both parts was 100 points.

Action research refers to a research process aimed at continuously developing and improving learning activities using the KWL Plus learning approach to enhance the Thai reading and writing skills of Vietnamese students. The research is conducted systematically in conjunction with online classroom teaching, using reflective practice to refine and improve the learning activities for greater effectiveness. The four-step cyclical action research process is as follows:

1. Planning: This step involves analyzing teaching problems, such as the difficulties Vietnamese students face in reading and writing Thai. It includes designing learning activities using the KWL Plus strategy and planning the teaching steps for all 12 online lessons.

2. Implementation: This step involves putting the planned learning activities into a real teaching context, focusing on systematically developing Thai reading and writing skills while promoting active student participation.

3. Observation: This step involves collecting data during the implementation process, such as test results, behavioral observations, student participation, and students' Thai reading and writing performance.

4. Reflection: This step focuses on evaluating the outcomes, identifying problems and obstacles, and analyzing learning outcomes to improve the teaching plan for the next cycle.

1.5 Expected benefits Received from Research

1.5.1 Vietnamese students develop higher levels of Thai reading and writing abilities in a systematic manner, particularly in decoding Thai script, reading consonants, vowels, and tone marks, reading words in accordance with Thai reading rules, as well as writing Thai vocabulary and sentences accurately and with comprehension. These

outcomes result from learning activities organized through the KWL Plus strategy and delivered via the 12 online lessons.

1.5.2 Students experience meaningful learning processes that enable them to connect prior knowledge with new knowledge, plan their own learning, summarize acquired knowledge, and apply Thai reading and writing skills appropriately in various contexts. This approach promotes active learning and supports the development of 21st-century learning skills.

1.5.3 The research provides guidelines for teachers of Thai as a foreign language, particularly those teaching Vietnamese learners, in designing and organizing Thai reading and writing learning activities using the KWL Plus strategy in conjunction with online lessons in a systematic manner. The proposed approach can be adapted or applied to beginner-level learners in other instructional contexts.

1.5.4 The findings offer academic information and empirical evidence demonstrating the effectiveness of KWL Plus-based learning activities in enhancing Thai reading and writing abilities among Vietnamese students. These results may serve as a foundation for developing curricula, online lessons, or instructional practices for Thai language teaching in the future.

1.5.5 The study contributes to the advancement of research in teaching Thai as a foreign language, particularly action research focused on improving authentic classroom learning processes. It may serve as a reference or knowledge base for researchers, teachers, and individuals interested in further studies related to this field.

CHAPTER 2
LITERATURE REVIEW

The research entitled “The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students” is an action research study. For this research, the researcher reviewed relevant documents, concepts, theories, and related studies to serve as the academic foundation for conducting the research, as follows:

1. Principles of Thai Reading and Writing
2. KWL Plus Learning Management
3. Learning Achievement in Thai Reading and Writing
4. Thai Reading and Writing Abilities
5. Action Research
6. Literature Review
7. Conceptual Framework

2.1 Principles of Thai Reading and Writing

Reading and writing Thai are fundamental skills that play a crucial role in learning Thai as a foreign language, particularly for Vietnamese learners whose phonological systems, writing systems, and linguistic structures differ significantly from Thai. The development of Thai reading and writing abilities requires a clear understanding of principles, concepts, instructional methods, as well as systematic assessment and evaluation. This is essential to ensure alignment with the objectives of the research entitled “The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students.”

2.1.1 Principles of Reading

2.1.1.1 Definition of Reading

Reading is a cognitive process in which readers perceive, interpret, and construct meaning from written symbols or texts through the integration of visual perception, prior knowledge, and thinking processes (Goodman, 1988). For learners of Thai as a foreign language, reading is not merely decoding written symbols but also

involves understanding the Thai sound system, tone rules, and word structures (Wannee Somprayuon, 2013).

2.1.1.2 Characteristics of Thai Reading

Thai reading has distinctive characteristics that differ from other languages, including the use of consonants, vowels, tone marks, and complex reading rules such as leading consonants, consonant clusters, final consonants, and words derived from Pali and Sanskrit (Kulthida Thongkham, 2017). For Vietnamese learners, difficulties in reading Thai often arise from differences in phonological systems and tonal representations, making it necessary to design instruction that is systematic and step-by-step.

2.1.1.3 Reading Methods and Teaching Approaches

Appropriate methods for teaching Thai reading to foreign learners should begin with instruction on the relationship between sounds and letters (phonics approach), combined with practice in both oral reading and reading comprehension (Adams, 1990). In addition, the KWL Plus strategy can enhance reading development by encouraging learners to activate prior knowledge (K: Know), formulate questions about what they want to learn (W: Want to know), summarize what they have learned (L: Learned), and organize their ideas further (+). This process supports meaningful reading development (Ogle, 1986).

2.1.1.4 Stages of Reading

The reading process can be divided into three stages:

1) Pre-reading, which focuses on activating prior knowledge and motivating learners;

2) While-reading, which emphasizes decoding, oral reading, and comprehension;

3) Post-reading, which involves summarizing, analyzing, and connecting newly acquired knowledge to learners' contexts.

These stages correspond closely with the KWL Plus instructional process, which emphasizes active learner participation

2.1.1.5 Assessment and Evaluation of Reading

Assessment and evaluation of Thai reading should cover reading accuracy, reading comprehension, and the ability to apply acquired knowledge. Assessment tools may include oral reading tests, reading comprehension tests, and behavioral observation during reading activities (Brown, 2004). Both quantitative and qualitative assessment methods should be employed to accurately reflect learners' reading development.

2.1.2 Principles of Writing

2.1.2.1 Definition of Writing

Writing is the process of expressing ideas, feelings, and experiences in written form in a systematic manner, drawing upon linguistic knowledge, organization of thought, and mechanical skills (Flower & Hayes, 1981). Writing Thai for Vietnamese learners requires an understanding of Thai orthography, spelling rules, and sentence structures.

2.1.2.2 Characteristics of Thai Writing

Thai writing is characterized by the use of consonants, vowels, tone marks, and the spatial arrangement of characters on a single line, which differs from the Vietnamese writing system. As a result, learners often encounter difficulties in spelling, tone mark usage, and writing words with leading consonants or consonant clusters (Anchalee Chuchat, 2016).

2.1.2.3 Writing Methods and Teaching Approaches

Instruction in Thai writing should begin with correct letter formation, followed by spelling practice, and gradually progress to sentence and short-text writing. Learning activities based on the KWL Plus strategy can help learners plan their writing, reflect on their ideas, and revise their written work systematically. This approach aligns with constructivist learning theory (Vygotsky, 1978).

2.1.2.4 Stages of Writing

The writing process consists of the following stages:

1) Planning;

2) Drafting;

3) Revising and editing;

4) Presenting written work.

These stages enable learners to develop writing skills continuously and effectively.

2.1.2.5 Assessment and Evaluation of Writing

Assessment of Thai writing should consider linguistic accuracy, clarity of content, and communicative effectiveness. Assessment methods may include the use of writing rubrics, written assignments, and process-based assessment (Weigle, 2002). Diverse assessment methods help provide a comprehensive reflection of learners' writing abilities.

2.2 KWL Plus Learning Management

KWL Plus learning management is a learner-centered instructional approach that encourages active learner participation in the learning process by activating prior knowledge, generating questions, summarizing newly acquired knowledge, and systematically expanding understanding. This approach is particularly suitable for developing Thai reading and writing abilities among Vietnamese students who learn Thai as a foreign language. Moreover, learning activities based on KWL Plus are consistent with the objectives of the research entitled "The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students."

2.2.1 Definition of KWL Plus Learning Management

KWL is a teaching strategy developed by Donna Ogle (1986) with the aim of promoting meaningful reading through encouraging learners to connect prior knowledge with new information. The KWL strategy consists of three stages:

K (Know): What learners already know

W (Want to know): What learners want to know

L (Learned): What learners have learned

Subsequently, the KWL strategy was further developed into KWL Plus by adding the "Plus (+)" component, which emphasizes organizing ideas, summarizing information, constructing concept maps, or writing summaries to extend and reinforce learners' understanding (Carr & Ogle, 1987).

Tisana Khammani (2019) explained that KWL Plus is a teaching technique that enables learners to think, analyze, and systematically reflect on their own knowledge. It promotes active learning and effectively enhances language skills, particularly reading and writing skills.

In addition, Richard T. Vacca and Jo Anne L. Vacca (1999) stated that KWL Plus is an instructional strategy that helps learners activate background knowledge, set purposes for reading, monitor comprehension, and organize acquired information through mapping and summarizing activities. This process encourages learners to become active and independent readers and writers.

Furthermore, Eileen Carr and Donna Ogle (1987) explained that the "Plus" component strengthens learners' comprehension by requiring them to synthesize information, categorize ideas, and present understanding in a structured form such as concept maps or written summaries. This process supports deeper learning and improves

learners' critical thinking abilities.

Based on the above definitions, KWL Plus learning management can be summarized as a learner-centered instructional process that uses learners' prior knowledge as a foundation, connects it to new knowledge, and promotes systematic summarization of ideas through reading and writing activities.

2.2.2 Characteristics and Components of KWL Plus Learning Management

KWL Plus learning management has several important characteristics that support effective language learning and active learner participation. According to Donna Ogle (1986), KWL Plus encourages learners to actively engage in the learning process by connecting their background knowledge with newly acquired information. The strategy also helps learners develop comprehension and critical thinking skills through questioning and reflection activities.

Similarly, Tisana Khammani (2019) explained that KWL Plus is a learner-centered instructional approach that promotes analytical thinking, systematic learning, and learner participation. Learners are encouraged to express their opinions, exchange ideas, and summarize knowledge through reading and writing activities.

In addition, Richard T. Vacca and Jo Anne L. Vacca (1999) stated that KWL Plus helps learners organize information systematically, develop independent learning skills, and improve comprehension through concept mapping and summary writing. These processes support both reading comprehension and writing development.

Furthermore, Lev Vygotsky (1978) emphasized that learning occurs through active knowledge construction based on prior experiences and social interaction. This concept is consistent with the principles of KWL Plus learning management, in which learners actively construct new understanding from their existing knowledge.

Based on the concepts above, the key characteristics of KWL Plus learning management can be summarized as follows:

1. It is a learner-centered instructional approach.
2. It promotes systematic thinking and active learning.
3. It meaningfully connects prior knowledge with new knowledge.
4. It simultaneously enhances reading and writing skills.
5. It encourages analytical thinking and independent learning.
6. It is suitable for learning a foreign language.

The components of KWL Plus learning management include the following:

1. Learners' prior knowledge (K: Know).

2. Learners' question generation (W: Want to know).

3. Knowledge summarization after learning (L: Learned).

4. Knowledge organization and expansion through Plus activities, such as summary writing, concept mapping, discussion, or reflective writing.

In summary, KWL Plus learning management is an instructional approach that emphasizes active learner participation, systematic thinking, and knowledge construction through the integration of prior knowledge and new learning experiences. The characteristics and components of KWL Plus effectively support the development of Thai reading and writing abilities among Vietnamese students learning Thai as a foreign language.

2.2.3 Objectives of KWL Plus Learning Management

KWL Plus is a teaching technique aimed at promoting meaningful learning through activating learners' prior knowledge, encouraging questioning, and organizing newly acquired knowledge systematically. The objectives of KWL Plus learning management have been explained by several educators and scholars as follows.

Martini (2003, cited in Watcharee Kaewsara, 2012) stated the objectives of learning management using the KWL Plus technique as follows:

1. To promote cooperative learning and teamwork among students.

2. To collect work samples from the KWL table as data for teachers to assist students in their learning.

3. To enable students to learn individually using work samples to assess student development.

Khanat Thathong (2008) similarly stated that learning management using the KWL Plus technique aims to train learners to be aware of their own learning process, involving planning, setting goals, checking their own understanding, and organizing knowledge efficiently.

In addition, Donna Ogle (1986) explained that KWL Plus aims to help learners activate background knowledge, develop curiosity through questioning, and improve reading comprehension by connecting prior knowledge with new information. The strategy also encourages learners to become active participants in the learning process.

Furthermore, Eileen Carr and Donna Ogle (1987) stated that the objective of the "Plus" component is to strengthen learners' understanding through organizing ideas,

summarizing information, and constructing concept maps. These activities help learners improve critical thinking, comprehension, and writing abilities.

Moreover, Tisana Khammani (2019) explained that KWL Plus learning management aims to encourage learners to think systematically, participate actively in learning activities, and develop language skills through reading, discussion, and writing practices. The approach also promotes learner confidence and independent learning.

Based on the concepts above, the objectives of KWL Plus learning management can be summarized as follows:

1. To promote active and learner-centered learning.
2. To encourage cooperative learning and classroom participation.
3. To develop learners' critical thinking and systematic thinking skills.
4. To connect learners' prior knowledge with new knowledge meaningfully.
5. To improve reading comprehension and writing abilities.
6. To train learners to organize, summarize, and reflect on knowledge independently.
7. To support learners in becoming self-directed and lifelong learners.

In summary, KWL Plus learning management is designed to promote meaningful learning by encouraging learners to actively construct knowledge, reflect on their understanding, and systematically organize information. The objectives of this instructional approach are highly appropriate for enhancing Thai reading and writing abilities among Vietnamese students learning Thai as a foreign language.

2.2.4 Steps of KWL Plus Learning Management

Eileen Carr and Donna Ogle (2004, cited in Wilaiwan Sawasdiwong, 2005) proposed the steps of the KWL Plus learning model as follows:

2.2.4.1 Step K (What do I know): Before students read the story, the teacher explains the main idea of the story and poses questions to stimulate brainstorming about what students already know. Students then categorize the information they gathered and write their answers in the K (What do I know) column of the pictograph. After that, students and the teacher collaboratively categorize the knowledge that is expected to occur in the story they are about to read.

2.2.4.2 Step W (What do I want to learn): In this step, students search for answers to questions about what they are interested in knowing or questions that do not yet have answers about the main idea of the story. Students also write a list of the questions they have posed. During reading, students can add questions and answers within their groups.

2.2.4.3 Step L (What did I learn): In this step, students record the knowledge gained during and after reading in the L (What did I learn) column and check whether there are any unanswered questions remaining.

2.2.4.4 Step PLUS (Summarizing): In this step, students work together to summarize the key concepts. Writing activities in this step are beneficial for both teachers and students in assessing students' understanding and organizing acquired knowledge systematically.

In addition, Donna Ogle (1986) explained that the KWL process begins with activating learners' background knowledge, followed by setting learning goals through questioning, and finally summarizing newly acquired knowledge. These steps help learners become active readers and independent learners.

Furthermore, Tisana Khammani (2019) stated that KWL Plus learning management consists of systematic learning activities that encourage learners to think analytically, exchange ideas, summarize knowledge, and apply learned information through writing and reflective activities. The process helps improve both comprehension and language skills effectively.

Similarly, Richard T. Vacca and Jo Anne L. Vacca (1999) explained that the KWL Plus process supports learners in organizing ideas systematically through questioning, concept mapping, summarizing, and discussion activities. These instructional steps also help learners monitor their own understanding during the learning process.

Based on the concepts above, the steps of KWL Plus learning management can be summarized into four major stages:

1. Activating prior knowledge (K: Know).
2. Setting learning goals through questioning (W: Want to know).
3. Summarizing knowledge gained from learning (L: Learned).
4. Organizing and extending knowledge through Plus activities, such as summarizing, concept mapping, and reflective writing.

For this research entitled "The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students," the researcher selected the KWL Plus learning management process based on the concepts of Eileen Carr and Donna Ogle. The researcher applied four instructional steps consisting of K (Know), W (Want to know), L (Learned), and Plus (Summarizing and organizing knowledge) as the framework for developing learning activities to enhance Thai reading and writing abilities among Vietnamese students.

2.2.5 Advantages, Benefits, and Limitations of KWL Plus Learning Management

KWL Plus learning management is widely recognized as an effective instructional approach for promoting active learning, reading comprehension, and writing development. Several scholars have discussed the advantages, benefits, and limitations of this teaching technique as follows.

Donna Ogle (1986) stated that KWL Plus encourages learners to actively participate in the learning process by connecting prior knowledge with new information. The strategy also helps learners set learning goals through questioning and promotes meaningful comprehension during reading activities.

Similarly, Tisana Khammani (2019) explained that KWL Plus promotes analytical thinking, learner participation, and systematic knowledge organization. Learners are encouraged to express opinions, exchange ideas, and summarize knowledge through reading and writing activities, which effectively improve language skills.

In addition, Richard T. Vacca and Jo Anne L. Vacca (1999) stated that KWL Plus supports independent learning and helps learners monitor their own understanding during the learning process. The use of concept mapping and summary writing activities also improves learners' comprehension and writing abilities systematically.

Furthermore, Eileen Carr and Donna Ogle (1987) explained that the "Plus" activities, such as concept mapping and summarizing, help learners synthesize knowledge, organize information effectively, and develop higher-order thinking skills.

Based on the concepts above, the advantages and benefits of KWL Plus learning management can be summarized as follows:

2.2.5.1 Advantages and Benefits

1) Encourages active learner participation.

2) Enhances meaningful reading comprehension skills.

3) Develops systematic writing and summarizing skills.

4) Helps learners become aware of their own learning processes.

5) Promotes analytical thinking and independent learning.

6) Encourages cooperative learning and classroom interaction.

7) Supports knowledge organization through concept mapping and reflective activities.

8) Is suitable for learners of Thai as a foreign language.

However, despite its advantages, KWL Plus learning management also has some limitations. Tisana Khammani (2019) noted that this instructional approach requires

teachers to carefully prepare learning activities and provide appropriate guidance throughout the learning process. In addition, learners with limited language proficiency may face difficulties in generating questions or summarizing information independently.

Therefore, the limitations of KWL Plus learning management can be summarized as follows:

2.2.5.2 Limitations

1) Requires a relatively large amount of instructional time.

2) Learners with limited language proficiency may generate fewer questions or have difficulty expressing ideas.

3) Teachers must carefully plan and organize learning activities.

4) Some learners may require additional guidance during summarizing and concept-mapping activities.

5) The effectiveness of the activities depends on learners' participation and background knowledge.

In summary, KWL Plus learning management is an effective learner-centered instructional approach that promotes active learning, reading comprehension, writing development, and systematic thinking. Although the approach requires careful planning and sufficient instructional time, its advantages are highly appropriate for developing Thai reading and writing abilities among Vietnamese students learning Thai as a foreign language.

2.2.6 Measurement and Assessment of KWL Plus Learning Management

Measurement and assessment in KWL Plus learning management should focus on both the learning process and learning outcomes in order to reflect learners' development comprehensively. H. Douglas Brown (2004) stated that authentic assessment is an important approach in language learning because it evaluates learners' actual performance and their ability to apply knowledge in real-life situations. Assessment should therefore include both skill performance and learner participation during instructional activities.

Similarly, Donna Ogle (1986) explained that assessment in KWL learning management should emphasize learners' thinking processes, background knowledge activation, questioning skills, and knowledge summarization. Teachers should assess how learners connect prior knowledge with new learning experiences and organize information systematically.

In addition, Tisana Khammani (2019) stated that assessment in learner-centered instructional approaches should include various methods, such as performance assessment, portfolio assessment, observation, and self-assessment, in order to reflect learners' knowledge,

skills, attitudes, and participation comprehensively.

Furthermore, Richard T. Vacca and Jo Anne L. Vacca (1999) explained that assessment in KWL Plus activities should focus on learners' comprehension, ability to summarize information, concept organization, and reflective thinking through reading and writing activities.

Based on the concepts above, the assessment methods used in KWL Plus learning management may include the following:

1. Assessment of Thai reading ability.
2. Assessment of Thai writing ability.
3. Portfolio assessment.
4. Assessment of participation in KWL Plus activities.
5. Self-assessment and reflective assessment.
6. Observation of learning behaviors and classroom participation.
7. Assessment of summarizing and concept-mapping activities.

These assessment methods comprehensively reflect the development of Thai reading and writing abilities among Vietnamese students and are consistent with the objectives of the research.

In summary, measurement and assessment in KWL Plus learning management emphasize authentic assessment that evaluates both learning processes and learning outcomes. Various assessment methods are used to reflect learners' reading comprehension, writing abilities, participation, analytical thinking, and self-reflection skills. Therefore, this assessment approach is appropriate for evaluating the development of Thai reading and writing abilities among Vietnamese students learning Thai as a foreign language.

2.3 Learning Achievement in Thai Reading and Writing

2.3.1 Definition of Learning Achievement in Thai Reading and Writing

From a review of related literature, scholars have defined learning achievement in ways that can be applied specifically to Thai reading and writing skills among foreign language learners.

Khanittha Boonphakdee (2009) defined learning achievement as learners' abilities and characteristics developed through participation in learning activities, which may be assessed through testing or alternative evaluation methods such as observation and performance-based assessment. In the context of Thai reading and writing for Vietnamese

learners, learning achievement reflects learners' ability to recognize Thai consonants and vowels, decode syllables, read words accurately, and write Thai symbols correctly.

Boonchom Srisaat (2011) described learning achievement as learning outcomes measured by assessments designed to determine whether learners have achieved predetermined objectives. These outcomes are expressed through cognitive behaviors such as memory, comprehension, application, analysis, synthesis, and evaluation. For Thai reading and writing, learning achievement includes the ability to recall Thai orthographic rules, understand the relationship between consonants, vowels, tones, and syllable structure, apply reading rules to unfamiliar words, and produce written Thai accurately.

Pairoj Kachen (2013) stated that learning achievement refers to the knowledge, abilities, and behavioral changes resulting from instruction and accumulated learning experiences. In learning Thai as a foreign language, particularly for Vietnamese learners, achievement in reading and writing is demonstrated through improved decoding skills, reading fluency, spelling accuracy, and written expression, all of which indicate cognitive development through systematic instruction.

Based on these perspectives, the researcher defines learning achievement in Thai reading and writing as the level of learners' abilities to decode, read, and write Thai accurately and meaningfully, developed through structured learning activities. This achievement can be assessed through reading and writing tests, observation of learning behaviors, and task-based assignments aligned with instructional objectives.

2.3.2 Types of Learning Achievement Tests for Thai Reading and Writing

Assessment of Thai reading and writing achievement for Vietnamese learners requires test formats that reflect the specific nature of the Thai writing system and reading processes.

Chawalit Chukampang (2008) classified learning achievement tests into several types, which can be applied to Thai reading and writing assessment as follows:

1. Essay Tests

Essay tests allow learners to demonstrate their understanding of Thai reading rules or explain spelling and pronunciation patterns. In writing assessment, essay tests can be used to evaluate learners' ability to construct written Thai words or short texts, reflecting their understanding of orthographic and phonological rules.

2. Completion Tests

Completion tests are suitable for assessing learners' ability to supply missing consonants, vowels, tone marks, or final consonants in Thai words. This format effectively measures learners' understanding of Thai syllable structure and spelling conventions.

3. Multiple-Choice Tests

Multiple-choice tests are commonly used to assess Thai reading skills, such as identifying correct pronunciation, tone patterns, or word meanings. They are effective for measuring recognition and comprehension of Thai reading rules.

4. True-False Tests

True-false tests can be used to assess learners' conceptual understanding of Thai orthography, such as rules for consonant classes, tone marks, or special reading cases. However, this format should be used carefully due to the possibility of guessing.

5. Matching Tests

Matching tests are appropriate for evaluating relationships between Thai letters and sounds, consonants and vowel symbols, or written words and their pronunciations. This format is particularly useful for beginning-level Vietnamese learners of Thai.

According to Boonchom Srisaat (2002, cited in Thidarat Iamkham, 2025), learning achievement tests can be classified into two major types:

1. Criterion-Referenced Tests (CRT)

Criterion-referenced tests are designed to measure learners' achievement against clearly defined objectives. In this study, CRTs are appropriate for assessing whether Vietnamese learners can read and write Thai according to specific learning outcomes, such as correctly reading syllables with tone marks or writing Thai consonant-vowel combinations accurately.

2. Norm-Referenced Tests (NRT)

Norm-referenced tests compare learners' performance with that of a reference group. Although less emphasized in instructional development studies, NRTs may be used to compare overall reading and writing proficiency levels among learners.

In developing learning achievement tests for Thai reading and writing, test construction should be aligned with Bloom's (1956) cognitive domain taxonomy, which includes knowledge, comprehension, application, analysis, synthesis, and evaluation. This alignment ensures that assessments measure not only memorization of Thai symbols but also learners' ability to apply reading rules and produce written Thai accurately.

From these principles, learning achievement tests for Thai reading and writing are defined as assessment instruments used to measure learners' ability to read and write Thai systematically and accurately, employing various test formats to ensure comprehensive and valid evaluation.

2.3.3 Principles of Measuring Thai Reading and Writing Achievement

Bloom (1958, cited in Yolwan Khanwua, 2024) proposed that learning achievement measurement in the cognitive domain consists of six hierarchical levels, which can be applied directly to Thai reading and writing instruction:

1. Knowledge Learners' ability to recall Thai consonants, vowels, tone marks, reading rules, and spelling conventions.

2. Comprehension Learners' understanding of how Thai consonants, vowels, tones, and syllable structures function together to form readable and writable words.

3. Application Learners' ability to apply Thai reading rules to unfamiliar words and write Thai syllables and words correctly based on learned patterns.

4. Analysis Learners' ability to analyze Thai words into components such as initial consonants, vowels, final consonants, and tone marks, and identify reading or spelling errors.

5. Synthesis Learners' ability to integrate knowledge of Thai orthography to read longer words or construct written expressions accurately.

6. Evaluation Learners' ability to evaluate their own reading and writing accuracy and make corrections based on learned rules.

The Ministry of Education (2008) emphasized that learning achievement assessment should include both pre-learning and post-learning measurement. In Thai reading and writing instruction for Vietnamese learners, pre-learning assessment helps identify learners' prior knowledge of Thai scripts, while post-learning assessment measures improvement in decoding, reading accuracy, and writing skills.

Based on these principles, the researcher concludes that effective measurement of Thai reading and writing achievement must align with learning objectives, reflect the unique characteristics of the Thai language, and accurately assess learners' cognitive development from basic recognition to practical application. Such assessment is essential for evaluating the effectiveness of learning activities using KWL Plus in promoting Thai reading and writing abilities among Vietnamese students.

2.4 Thai Reading and Writing Abilities

2.4.1 Definition of Thai Reading and Writing Ability

Many scholars have defined reading and writing ability within the context of language learning, particularly foreign language learning, as follows.

Good (1973, cited in Wichian Suwannachok-isan, 2016) explains that reading and writing ability is a cognitive process in which learners decode linguistic symbols, construct meaning, and express ideas systematically in written form.

Grabe and Stoller (2011) define reading ability as the ability to decode written symbols, connect letters with sounds, and comprehend textual meaning. Writing ability, on the other hand, refers to the ability to use an orthographic system, spelling rules, and grammatical structures to convey ideas accurately and appropriately.

Thipsana Khammani (2019) states that reading and writing ability is a fundamental language skill that requires systematic thinking, the integration of prior knowledge with new knowledge, and continuous practice-especially for foreign language learners whose first language systems differ from the target language.

In the context of Thai as a foreign language, the Office of the Basic Education Commission (2008) defines Thai reading ability as the ability to read Thai consonants, vowels, tone marks, and reading rules accurately, while Thai writing ability refers to the ability to write Thai consonants, vowels, tone marks, and words correctly according to Thai orthographic conventions.

Based on these definitions, the researcher concludes that Thai reading and writing ability refers to the ability of Vietnamese learners to decode, pronounce, and comprehend Thai words, as well as to correctly write Thai consonants, vowels, tone marks, words, and simple texts in accordance with Thai reading and writing rules, as a result of systematically organized learning activities.

2.4.2 Theories Related to Thai Reading and Writing Ability

Several learning theories can effectively explain the development of Thai reading and writing ability among Vietnamese learners.

Bloom (1956) proposed the taxonomy of the cognitive domain, which explains that language learning begins at the level of knowledge recall-such as memorizing consonants and vowels-and progresses toward comprehension, application, analysis of reading rules, synthesis of words, and evaluation of reading and writing accuracy. This progression aligns with the process of learning Thai among beginner-level learners.

Gagné (1974, cited in Natthawat Kheawdee, 2018) explains that intellectual skills develop from basic to complex levels. The development of Thai reading and writing ability among Vietnamese learners should begin with the discrimination of letters and sounds, followed by grapheme-phoneme correspondence, word reading, word writing, and finally the application of language in new contexts.

Vygotsky (1978) proposed the theory of social constructivism and the Zone of Proximal Development (ZPD), which emphasizes that learners can enhance their reading and writing ability through interaction, questioning, and reflection. This theoretical perspective strongly supports the use of KWL Plus learning activities.

Furthermore, constructivist learning theory suggests that learners actively construct new knowledge based on prior experiences. In Thai language learning, connecting Vietnamese phonological knowledge with the Thai writing system-such as sound comparison, transcription, and reading rules-plays a crucial role in developing Thai reading and writing ability.

These theoretical perspectives indicate that the development of Thai reading and writing ability among Vietnamese learners requires a step-by-step learning process, the integration of prior knowledge, and the promotion of systematic thinking.

2.4.3 Components of Thai Reading and Writing Ability

Based on relevant academic literature, the components of Thai reading and writing ability for Vietnamese learners can be summarized as follows:

1. Decoding Ability

The ability to read Thai consonants, vowels, tone marks, consonant clusters, leading consonants, and special reading cases.

2. Understanding of Thai Phonological and Orthographic Systems

Learners must understand the relationships among consonants, vowels, tone marks, and Thai syllable structures.

3. Ability to Read Words and Texts Accurately

This includes reading basic words, words with final consonants, words with tone marks, and words derived from Pali and Sanskrit.

4. Ability to Write Thai Correctly

This involves writing consonants, vowels, tone marks, spelling words correctly, and composing simple words or sentences.

5. Ability to Apply Thai Reading and Writing Rules

Learners can transfer learned rules to new words or unfamiliar reading and

writing situations.

These components align with the structure of the twelve online lessons and serve as a fundamental basis for the systematic development of Thai reading and writing skills.

2.4.4 Characteristics of Thai Reading and Writing Ability among Vietnamese Learners

Thai reading and writing ability among Vietnamese learners exhibits the following characteristics:

1. It requires learning an entirely new writing system.
2. It involves connecting Vietnamese phonological knowledge with Thai sounds.
3. Learners must acquire complex reading rules, such as tone rules, consonant clusters, and loanwords.
4. Skill development progresses from word-level reading and writing to text-level literacy.
5. Continuous practice through diverse learning activities is essential.

These characteristics demonstrate that KWL Plus learning activities-which emphasize prior knowledge activation, questioning, summarization, and knowledge expansion-are particularly suitable for enhancing Thai reading and writing ability among Vietnamese learners.

2.4.5 Assessment of Thai Reading and Writing Ability

Assessment of Thai reading and writing ability should be based on authentic assessment and aligned with learning objectives (Brown, 2004). Assessment methods include:

1. Thai reading tests
2. Thai writing tests
3. Evaluation of learner performance in KWL Plus activities
4. Portfolio assessment
5. Self-assessment and reflective writing

These assessment approaches comprehensively reflect the development of Thai reading and writing ability among Vietnamese learners and provide empirical evidence for evaluating the effectiveness of KWL Plus-based learning activities.

2.5 Action Research

Action research is a research approach that has been widely adopted in educational studies, particularly in the development of teaching and learning practices. This is because action research focuses on solving real problems encountered in instructional contexts while simultaneously enhancing teachers' professional development and improving learners' educational quality. Therefore, the research entitled "The development of learning activities using KWL Plus to promote Thai reading and writing abilities for Vietnamese students" is highly appropriate to be conducted using the action research framework.

2.5.1 Definition of Action Research

Several scholars have defined action research as follows.

Lewin (1946) stated that action research is a process of inquiry conducted by practitioners themselves to solve problems arising from real practices. It consists of key stages, namely planning, action, and observation. Action research emphasizes systematic procedures aimed at improving the quality of work through reflective practices, enabling practitioners to apply the findings effectively to real-world problem solving.

Yajai Phongpriboon (2009) explained that action research is a form of research that emphasizes collaborative group work and shared decision-making, with the goal of bringing about positive change. The process typically includes three major steps: planning, action, and reflection.

Prasart Nueangchalerm (2013) stated that classroom action research is a form of research conducted concurrently with teaching practices. It employs systematic and credible research processes to seek solutions to problems arising within classroom contexts.

Kemmis and McTaggart (1988, cited in Veerayut Chatakarn, 2015) described action research as a form of research that differs from other types not in technical aspects but in its methodology. Action research involves a spiral of self-reflective cycles consisting of planning, action, observation, and reflection. It requires the participation of those involved in the reflective process in order to improve and develop practices effectively.

Sompong Phamulila (2018) stated that action research is a research process aimed at solving problems through practical experimentation in natural settings. It emphasizes systematic data collection, step-by-step change, and continuous participation

of stakeholders throughout the research process, eventually generating new knowledge that can be synthesized into principles and theoretical insights.

Based on these perspectives, the researcher concludes that action research refers to a systematic and continuous research process in which the researcher plans, implements, observes, and reflects on instructional practices in order to improve teaching effectiveness and enhance learners' educational outcomes.

2.5.2 Characteristics of Action Research

Many scholars have identified key characteristics of action research.

Boonchom Srisaard (2003, cited in Wassana Suepklat, 2012) described the main characteristics of action research as follows:

1. It focuses on solving problems arising from the researcher's actual professional practice.
2. It emphasizes action and continuous improvement of practices.
3. It may be conducted individually or collaboratively with others.
4. It is context-specific and does not aim for broad generalization.
5. It is flexible and allows for modification of objectives and methods according to situational needs.

Kittiporn Panyaphinyopon (2008) further noted that action research integrates reflective thinking with real practice in a clear manner. It involves reviewing practices before and after implementation, leading to meaningful improvement and positive change.

From these viewpoints, the researcher concludes that action research is particularly suitable for developing Thai language instruction for Vietnamese learners, as it allows teaching activities to be flexibly adjusted to learners' difficulties and needs while providing concrete evidence of learning improvement.

2.5.3 Procedures of Action Research

Stephen Kemmis and Robin McTaggart (1988, cited in Wassana Suepklat, 2012) proposed four cyclical stages of action research as follows:

1. Planning

This stage involves analyzing instructional problems, such as difficulties faced by Vietnamese students in Thai reading and writing. It includes designing learning activities using the KWL Plus strategy and planning instructional procedures for the twelve online lessons.

2. Action

This stage involves implementing the planned learning activities in actual teaching contexts, focusing on the systematic development of Thai reading and writing skills while encouraging active learner participation.

3. Observation

This stage involves collecting data during the implementation process, such as test results, behavioral observations, learner participation, and students' Thai reading and writing performance.

4. Reflection

This stage focuses on evaluating outcomes, identifying problems and obstacles, and analyzing learning results in order to revise and improve instructional plans for subsequent cycles.

In addition, Kurt Lewin (1946) explained that action research is a cyclical process involving planning, action, and fact-finding about the results of the action. The main purpose of action research is to improve practices systematically through continuous reflection and revision.

Similarly, Jean McNiff (2002) stated that action research is a reflective process conducted by practitioners to improve their own teaching practices, solve classroom problems, and enhance learners' achievement through continuous cycles of action and reflection.

Furthermore, Jack Whitehead (2006) explained that action research enables teachers to examine their own instructional practices critically and systematically in order to improve the effectiveness of teaching and learning. Reflection and self-evaluation are therefore essential components of the action research process.

Based on the concepts above, the procedures of action research can be summarized into four major stages:

1. Planning instructional activities and identifying problems.

2. Implementing the planned actions in actual classroom situations.

3. Observing and collecting data during the instructional process.

4. Reflecting on the outcomes in order to improve subsequent instructional practices.

These stages are conducted in a spiral cycle until an effective instructional model is achieved.

For this research entitled "The Development of Learning Activities Using KWL

Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students," the researcher selected the action research process based on the concepts of Stephen Kemmis and Robin McTaggart. The researcher applied four stages consisting of Planning, Action, Observation, and Reflection in order to systematically develop and improve learning activities using KWL Plus for enhancing Thai reading and writing abilities among Vietnamese students.



Figure 2.1 The Action Research Cycle

2.5.4 Benefits of Action Research

Suwimon Wongwanich (2007) stated that action research enables teachers to develop research skills, enhance professional competence, and foster learning communities within educational institutions.

Samran Kamjadpai (2007) noted that classroom action research yields benefits in four major areas: teachers, learners, instructional processes, and the teaching profession as a whole.

Based on these perspectives, the researcher concludes that action research plays a vital role in developing learning activities using KWL Plus to promote Thai reading and writing abilities among Vietnamese students. It allows teachers to refine instructional practices to better suit learners' needs and leads to tangible improvements in students' reading and writing proficiency.

2.6 Literature Review

The purpose of reviewing related studies in this research is to collect, analyze, and synthesize concepts, research findings, and trends in instructional management that employ the KWL Plus strategy or strategies developed from KWL to enhance reading and writing skills. These studies cover both first language and foreign language learning contexts, with particular emphasis on learning Thai as a foreign language. The related studies are classified into two categories: domestic studies and international studies, as detailed below.

2.6.1 Domestic Studies

Research in Vietnam has increasingly focused on learner-centered and strategy-based instruction to improve foreign language literacy skills, particularly in English and other foreign languages.

Nguyen Thi Thu Ha (2016) conducted a study entitled "The Use of KWL Strategy in Teaching Reading Comprehension to Vietnamese EFL High School Students." The objectives of the research were to investigate the effectiveness of the KWL strategy on students' reading comprehension and learning motivation. The research instruments included reading comprehension tests, classroom observation forms, and student questionnaires. The findings revealed that students who learned through KWL achieved significantly higher reading comprehension scores and demonstrated greater motivation than students taught through traditional instructional methods.

Tran Van Phuc (2017) conducted a study entitled "Metacognitive Reading Strategies among Vietnamese University Students Learning Foreign Languages." The objective of the study was to examine the effects of metacognitive reading strategies on learners' reading comprehension and academic performance. The research instruments consisted of questionnaires, reading achievement tests, and interviews. The results indicated that explicit instruction in metacognitive strategies positively affected students' comprehension and self-monitoring abilities.

Le Thi Minh Anh (2018) conducted an action research study entitled "Integrating Reading and Writing Activities in Foreign Language Classrooms in Vietnam." The objective of the study was to improve students' writing skills through integrated reading and writing instruction. The instruments included lesson plans, writing assessment forms, reflective journals, and observation checklists. The findings showed that students' writing coherence and vocabulary usage improved when reading tasks were linked to summarization

and reflective writing activities.

Pham Thi Hong Nhung (2019) conducted a study entitled "Strategy-Based Instruction for Beginner Learners of a Foreign Language in Vietnam." The purpose of the study was to investigate the effectiveness of structured instructional strategies in promoting reading and writing skills among beginner learners. The research instruments included achievement tests, questionnaires, and classroom observations. The findings revealed that structured instructional frameworks similar to KWL Plus enhanced learners' confidence, reading accuracy, and basic writing abilities.

Le Thi Thao Vy and Nguyen Thi Thanh Ha (2020) conducted a study entitled "The Effect of the KWL Strategy on Vietnamese Fifth-Grade Students' Reading Comprehension Achievement at VStar School." The objective of the study was to investigate the effectiveness of the KWL strategy on reading comprehension achievement among Vietnamese primary school students. The research employed a quasi-experimental design with 50 fifth-grade students divided into an experimental group (N=25) and a control group (N=25). The research instruments included pre-tests, post-tests, questionnaires, and classroom observations.

The findings showed statistically significant differences between the experimental and control groups after the implementation of the KWL strategy. The mean score of the experimental group increased from 16.32 in the pre-test to 21.16 in the post-test, while the control group improved from 16.76 to 18.76. The independent-samples t-test indicated a statistically significant difference between the two groups ($t(48)=2.053$, $p=.046$). The effect size was also reported as large (eta squared = .08), indicating that the KWL strategy had a significant positive effect on students' reading comprehension achievement.

Vo Nguyen Bao Chau (2021) conducted a study entitled "Learner-Centered Instructional Models in Online Language Learning Environments in Vietnam." The objective of the study was to examine the effectiveness of learner-centered instructional models in online learning contexts. The instruments consisted of online learning activity assessments, observation forms, and student satisfaction questionnaires. The findings emphasized that instructional models encouraging learner interaction, reflection, and active knowledge construction effectively improved reading and writing outcomes.

2.6.2 International Studies

International research has widely documented the effectiveness of KWL and KWL Plus strategies across different languages and educational levels.

Hatice Tok (2018) conducted a study entitled “The Effects of the KWL Strategy on EFL Learners’ Reading Comprehension and Metacognitive Awareness.” The objective of the study was to examine the effects of the KWL strategy on reading comprehension and metacognitive awareness among EFL learners. The instruments included reading comprehension tests and metacognitive awareness questionnaires. The findings demonstrated significant gains in learners’ comprehension and engagement.

Maureen McLaughlin and Mary Beth Allen (2017) conducted a study entitled “Strategy-Based Literacy Instruction and KWL Plus.” The objective of the study was to investigate the effectiveness of KWL Plus in improving literacy skills. The instruments included writing assessment rubrics, comprehension tests, and classroom observations. The results revealed that KWL Plus significantly improved students’ ability to synthesize information and produce coherent written summaries.

Abdulrahman O. Alsheikh and Kouider Mokhtari (2018) conducted a study entitled “Metacognitive Reading Strategies among ESL Learners.” The objective of the research was to examine the relationship between metacognitive strategies and literacy performance among ESL learners. The instruments included strategy inventory questionnaires and reading-writing performance assessments. The findings reported positive effects on both reading comprehension and academic writing performance.

Aeri Hyeon Kim, Sharon Vaughn, Jeanne Wanzek, and Siying Wei (2018) conducted a study entitled “Integrated Reading-Writing Instruction for Second Language Learners.” The purpose of the study was to investigate the effectiveness of integrating reading comprehension strategies with structured writing tasks. The instruments included literacy achievement tests and writing assessments. The findings concluded that integrated reading-writing instruction significantly improved literacy outcomes among second language learners.

Nguyen M. T. T. and Frank Boers (2022) conducted a study entitled “Strategy-Based Instruction in Foreign Language Reading and Writing.” The objective of the study was to examine the effects of metacognitive instructional frameworks on learners’ reading and writing abilities. The instruments included achievement tests, reflective journals, and learner questionnaires. The findings indicated that metacognitive frameworks similar to KWL Plus enhanced learners’ retention, writing organization, and self-regulated learning.

In addition, Siti Rahmah (2023) conducted a study entitled “The Effectiveness of KWL Plus Strategy in Improving Reading Comprehension and Writing Skills among

EFL Students." The objective of the study was to investigate the effectiveness of KWL Plus in enhancing students' reading comprehension and writing skills. The research instruments included pre-test and post-test assessments, observation forms, and student questionnaires. The findings showed that students who learned through KWL Plus achieved higher reading comprehension scores and demonstrated better writing organization and classroom participation.

Furthermore, Nur Aisyah Putri and Ahmad Fauzan (2024) conducted a study entitled "Using KWL Plus Strategy to Promote Reflective Learning in Online Language Classrooms." The objective of the study was to examine the effects of KWL Plus on reflective learning and learner engagement in online language classrooms. The instruments included reflective journals, participation observation forms, and writing assessments. The findings revealed that KWL Plus effectively promoted learner interaction, self-reflection, and writing performance in online learning environments.

Moreover, Maria Elena Cruz (2025) conducted a study entitled "KWL Plus and Metacognitive Literacy Development among Foreign Language Learners." The objective of the study was to investigate the role of KWL Plus in developing metacognitive literacy skills among foreign language learners. The research instruments consisted of literacy achievement tests, self-assessment forms, and classroom observation checklists. The findings indicated that KWL Plus improved learners' reading comprehension, summarization skills, writing accuracy, and self-regulated learning behaviors.

The reviewed literature clearly demonstrates that reading and writing skills are interdependent and that metacognitive, learner-centered instructional strategies such as KWL Plus are effective in enhancing foreign language literacy. Domestic studies in Vietnam confirm the positive impact of strategy-based and reflective learning approaches on reading and writing development, while international research provides robust evidence supporting the effectiveness of KWL Plus and integrated reading-writing instruction.

However, despite these positive findings, there is a notable lack of empirical research focusing on the application of KWL Plus in teaching Thai reading and writing to Vietnamese learners, particularly at the beginner level and in online learning contexts. Most existing studies have focused on English or other widely taught foreign languages. Therefore, the present study seeks to address this research gap by developing learning activities using KWL Plus to promote Thai reading and writing abilities for Vietnamese students.

2.7 Conceptual Framework

Based on a review of relevant documents, textbooks, and research related to the KWL Plus learning activity model to promote Thai reading and writing abilities as well as learning achievement in Thai reading and writing among Vietnamese students, the researcher proposes the following conceptual framework for the study.

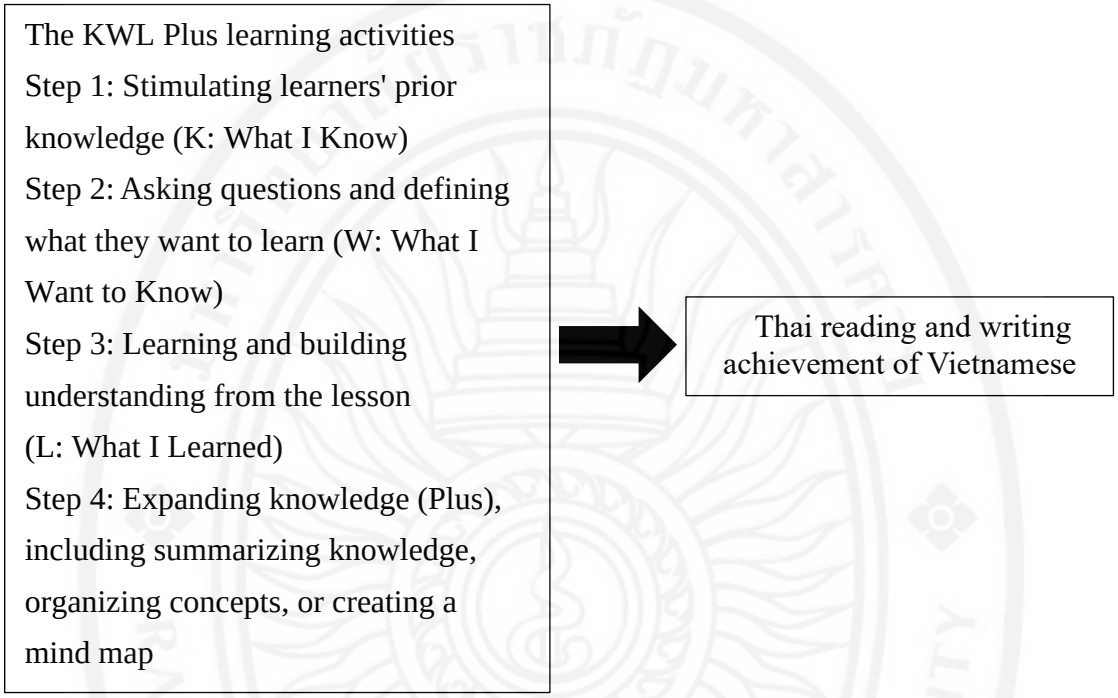


Figure 2.2 Conceptual Framework

CHAPTER 3
RESEARCH METHODOLOGY

In this research, the researcher conducted an experimental research according to the following steps:

1. Population and sample
2. Research Tools
3. Construction and Quality Assessment of Research Tools
4. Data Collection
5. Data Analysis
6. Statistics used in data analysis

3.1 The target group

The target group is a Vietnamese classroom with 6 Vietnamese students who are beginner-level Thai learners, determined by the criterion that they lack formal Thai reading and writing knowledge. And are willing to participate in online learning activities using the KWL Plus strategy throughout the duration of their studies.

3.2 Research Tools

3.2.1 Action Tools

The action instruments consisted of 12 lesson plans developed based on the KWL Plus learning approach, aimed at enhancing the Thai reading and writing abilities of Vietnamese students. The total instructional time was 24 hours.

Action Cycle 1 consisted of the following lesson plans:

Lesson Plan 1: Thai Consonants and the Three Consonant Classes (2 hours)

Lesson Plan 2: Vowels and Their Positions (2 hours)

Lesson Plan 3: Reading Initial Consonants with Vowels (2 hours)

Lesson Plan 4: Final Consonants and Vowel Modifications (2 hours)

Lesson Plan 5: Reading with Final Consonants (2 hours)

Action Cycle 2 consisted of the following lesson plans:

Lesson Plan 6: Tones in Thai and Reading with Tone Marks (2 hours)

Lesson Plan 7: Leading Consonants (2 hours)

Lesson Plan 8: Consonant Clusters (2 hours)

Lesson Plan 9: Reading with Double ร, Words Using the Vowel "ไ", and Other Special Cases (2 hours)

Action Cycle 3 consisted of the following lesson plans:

Lesson Plan 10: Marks in Thai (2 hours)

Lesson Plan 11: How to Read Words with ฤ and How to Read Words with ฑ (2 hours)

Lesson Plan 12: Pali and Sanskrit Languages (2 hours)

3.2.2 Evaluation Tools

The achievement test for Thai reading and writing skills was designed as a test consisting of two parts. Part 1 assessed reading ability using 46 multiple-choice questions (46 points), and Part 2 assessed writing ability using 6 essay questions (54 points). A writing assessment form was then used to grade the scores. The total score for both parts was 100.

3.2.3 Reflection Tools

3.2.3.1 Behavioral Observation Form

3.2.3.2 Teaching Reflection Form/Teaching Record Form

3.2.3.3 Interview Form

3.3 Construction and Quality Assessment of Research Tools

3.3.1 Action Tools

The action tools used in this study consisted of twelve lesson plans developed based on KWL Plus learning activities to enhance the Thai reading and writing abilities of Vietnamese students. The total instructional time was 24 hours. The researcher developed the lesson plans following the procedures described below.

3.3.1.1 Review of Concepts, Theories, and Related Literature

The researcher reviewed concepts and theories related to the KWL Plus learning approach, as well as theories concerning the development of Thai reading and writing skills for foreign learners, particularly Vietnamese learners. In addition, principles of Thai as a Foreign Language (TFL) instruction were examined to serve as

guidelines for designing learning activities appropriate to the learners' context and consistent with the objectives of the study.

3.3.1.2 Review of Curricula and Content Related to Teaching Basic Thai Reading and Writing. The researcher examined curricula for teaching Thai to foreigners at the beginner (A0) level, including the structure of the Thai writing system, principles of pronunciation, tone rules, spelling, and specific characteristics of Thai words derived from Pali and Sanskrit. These contents were used as a framework for determining the learning content of all twelve lesson plans.

3.3.1.3 Determination of the Format and Structure of the Lesson Plans

The researcher designed twelve lesson plans based on the KWL Plus learning approach, each lasting 2 hours, for a total of 24 hours. The implementation was divided into three action cycles. Each lesson plan consisted of the following key components:

1) Key concepts
2) Learning objectives
3) Learning content
4) Learning activities following the KWL Plus process
5) Instructional media and learning resources
6) Measurement and evaluation

3.3.1.4 The lesson plans developed by the researcher were consulted with the academic advisor to examine the accuracy and appropriateness of the content. The researcher then revised the lesson plans in accordance with the advisor's recommendations to address any identified deficiencies.

Table 3.1 Table of Analysis of KWL Plus–Based Lesson Plans for Enhancing Thai Reading and Writing Abilities of Vietnamese Students

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
Action Cycle 1 consisted of the following lesson plans						
1 (2 hours)	Thai consonant system and three consonant classes	Students can classify the three consonant classes and read/write basic consonants	Thai consonants; middle, high, and low classes	K: The teacher activates learners' prior knowledge by presenting basic Thai consonants and asking learners whether they have previously encountered the Thai writing system. Learners are encouraged to share their initial impressions and prior experiences with Thai consonants W: Learners identify their learning needs by posing questions related to Thai consonants and consonant classes, such as the number of Thai consonants, the rationale for classifying consonants into three classes, and how consonant classes affect pronunciation and reading L: Learners summarize the knowledge gained from the lesson by identifying Thai consonants and classifying them into mid, high, and low consonant classes. Learners demonstrate their understanding through oral explanations, classification tasks, or completing summary tables Plus: Learners participate in reinforcement and application activities to strengthen reading and writing skills. Activities include practicing reading aloud Thai consonants, practicing writing consonants, completing short quizzes on consonant	PDF file for practicing writing the Thai alphabet, PDF learning materials for Session 1, and audio files on the Thai alphabet	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				classification, engaging in quick quizzes, short multiple-choice tests or coloring activities based on the three consonant classes, and reflecting on their learning outcomes		
2 (2 hours)	Thai vowels and their positions	Students can read and write vowels in different positions	Simple vowels, complex vowels, special vowels and vowel positions	K: The teacher activates learners' prior knowledge by presenting examples of Thai syllables containing vowels and asking learners whether they have previously encountered Thai vowels. Learners are encouraged to recall and share their initial understanding of Thai vowels and their positions in relation to consonants W: Learners are guided to identify and express their learning needs by posing questions related to Thai vowels, such as the number of vowels, their different forms, and their positions (before, after, above, below, or surrounding consonants). The teacher records learners' questions and expectations to guide the learning process L: Learners summarize the knowledge gained from the lesson by identifying different types of Thai vowels and explaining their positions in written syllables. Learners demonstrate their understanding through class discussion, completing summary charts, or matching vowels with their correct positions	PDF file for practicing writing Thai vowels and PDF learning materials for Session 2	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Plus: Learners engage in reinforcement and application activities to strengthen their reading and writing skills. Activities include practicing writing Thai vowels in correct positions, completing exercises that match vowels with consonants, and participating in short quizzes to consolidate learning outcomes		
3 (2 hours)	Blending initial consonants with vowels	Students can accurately read and write open syllables	Reading Initial Consonants with Vowels	K: The teacher activates learners' prior knowledge by presenting examples of Thai syllables formed by combining initial consonants with vowels. Learners are asked to observe the position of vowels and attempt to read the syllables based on their prior experience W: Learners identify their learning needs by posing questions related to reading initial consonants combined with vowels, such as how vowel position affects pronunciation and what rules should be followed when reading different vowel forms L: Learners summarize the knowledge gained from the lesson by explaining the rules for reading initial consonants combined with vowels and identifying how vowel positions influence pronunciation. Learners demonstrate their understanding through discussion, completing summary tables, or matching	PDF learning materials for Session 3	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				exercises Plus: Learners engage in reinforcement and application activities to develop reading and writing skills. Activities include practicing reading aloud syllables formed by initial consonants and vowels, practicing writing syllables correctly, completing reading drills and short quizzes, and applying the reading rules to simple words		
4 (2 hours)	Final consonants and vowel modifications	Students are able to remember the final consonant groups and the forms of modified vowels	Final Consonants and Unwritten Vowels	K: The teacher activates learners' prior knowledge by presenting examples of Thai words with and without final consonants. Learners observe differences in word structure and vowel forms and share their initial observations based on prior learning experiences. W: Learners identify their learning needs by posing questions related to final consonants and vowel modifications, such as how final consonants are pronounced, why vowel forms change when final consonants are added, and what reading rules should be applied L: Learners summarize the knowledge gained from the lesson by explaining the characteristics of Thai final consonants, the rules for reading final consonants, and the patterns of vowel	PDF learning materials for Session 4	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				modification. Learners demonstrate their understanding through discussion, completing summary charts, or classifying words according to vowel changes. Plus: Learners participate in reinforcement and application activities to enhance their reading and writing skills. These activities include practicing memorization of final consonant groups, practicing writing words with modified vowels, completing exercises that distinguish between words with and without final consonants, and taking short quizzes to reinforce retention of final consonants and various forms of vowel modification		
5 (2 hours)	Reading words with final consonants	Students can accurately read and write words with final consonants	Words with various final consonants	K: The teacher activates learners' prior knowledge by reviewing the concept of final consonants introduced in the previous lesson. Learners are shown sample Thai words containing final consonants and are asked to identify the final consonants and predict their pronunciation based on their existing knowledge W: The teacher guides learners to formulate questions about reading words with final consonants, such as how final consonants are pronounced, why different consonant letters	PDF learning materials for Session 5	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				may share the same final sound, and what reading rules apply when final consonants occur in Thai words L: Learners study and summarize the rules for reading Thai words with final consonants, including the classification of final consonant sounds. Learners explain the reading rules in their own words and provide examples of words with final consonants to demonstrate their understanding Plus: Learners practice reading aloud words and short phrases containing final consonants. Additional activities include pronunciation drills, reading exercises, writing practice, and short quizzes to reinforce reading accuracy and fluency. Learners also reflect on their learning outcomes at the end of the lesson		
Action Cycle 2 consisted of the following lesson plans						
6 (2 hours)	Thai tones	Students can read and write tonal words correctly	Tones and tone rules	K: The teacher activates learners' prior knowledge by encouraging them to recall their experiences with Thai pronunciation. Learners are asked whether they have noticed differences in pitch or tone when listening to Thai words. The teacher plays sample Thai words without tone marks and asks learners to identify perceived high, mid, or low sounds,	PDF file for practicing writing tone marks and PDF learning materials for	Observation of students' learning behaviors, reading and writing

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				aiming to raise awareness of tonal variation in Thai W: Learners are guided to formulate questions related to Thai tones, such as: How many tone marks are there in Thai? How do tone marks affect pronunciation? How can tones be identified when reading Thai words? These questions are recorded to clarify learners' learning needs and objectives for the lesson L: The teacher explains the Thai tonal system, introducing tone marks and their functions. Learners study the rules for reading words with tone marks, including the relationship between consonant classes and tones. Examples are provided, and learners practice identifying tones in written words. At the end of this stage, learners summarize the tonal rules and explain how tone marks influence pronunciation Plus: Learners participate in reinforcement activities to apply their knowledge of Thai tones, including listening and repeating words with different tone marks, reading aloud words and short sentences with tone marks, and writing words with correct tone marks. Additional activities may include tone discrimination exercises, short quizzes, and	Session 6	practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				reflective writing on pronunciation challenges. These activities emphasize active practice and the development of accurate reading and writing skills in Thai		
7 (2 hours)	Leading consonants	Students can read and write words with leading consonants	Rules for reading leading consonants	K: The teacher activates learners' prior knowledge by reviewing previously learned concepts, including Thai consonants, the three consonant classes (mid, high, and low), and basic tone rules. Learners are asked to read familiar words and recall how the initial consonant class influences tone. This stage helps learners connect existing knowledge to the new topic W: Learners are encouraged to identify and express their questions about words that contain two initial consonants. Guiding questions include: Why are some Thai words written with two consonants but pronounced with only one? How do leading consonants affect tone? Which consonants can function as leading consonants? These questions are recorded to clarify learners' learning goals for the lesson L: The teacher introduces the concept of leading consonants in Thai, explaining their function and characteristics. Learners study common leading consonants and the rules	PDF learning materials for Session 7	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				governing their influence on tone, particularly how leading consonants modify the consonant class of the following consonant. Examples are provided, and learners practice identifying leading consonants and reading words with correct pronunciation. Learners then summarize the rules and explain how leading consonants affect tone Plus: Learners engage in reinforcement activities to consolidate their understanding of leading consonants, such as reading aloud words containing leading consonants, analyzing word structures to identify leading and main consonants, completing short quizzes on tone determination, and writing words with leading consonants. Additional reflective activities may be included to encourage learners to reflect on pronunciation challenges and learning outcomes		
8 (2 hours)	Consonant clusters	Students can read and write words with consonant clusters	True and false consonant clusters; Reading "ทร"	K: The teacher reviews learners' prior knowledge of Thai consonants, consonant classes, tone rules, and leading consonants. Learners are asked to recall how leading consonants function and to read previously learned words containing leading consonants. This activity helps learners establish a foundation for distinguishing between leading	PDF learning materials for Session 8	Observation of students' learning behaviors, reading and writing

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				consonants and consonant clusters W: Learners are guided to raise questions about Thai words that contain two initial consonants pronounced together. Sample questions include: What is a consonant cluster? How is a consonant cluster different from a leading consonant? Which consonants can form consonant clusters in Thai? How should consonant clusters be pronounced? In addition, learners are encouraged to raise questions about Thai words that do not follow regular reading rules. Guiding questions include: Why is "ทร" pronounced as /x/? and why are there cases where "ทร" is pronounced thr? These questions are recorded to clarify learners' learning objectives for the lesson. L: The teacher introduces the concept of consonant clusters in Thai, explaining their characteristics and pronunciation rules. Learners study common consonant clusters and practice identifying them in written words. Examples are provided to demonstrate correct pronunciation. Learners then summarize the rules for reading consonant clusters and explain the differences between consonant clusters and leading consonants.		practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Plus: Learners participate in reinforcement activities to apply their knowledge of consonant clusters, including reading aloud words with consonant clusters, comparing words with consonant clusters and words with leading consonants, completing short quizzes, and practicing writing words containing consonant clusters. Reflective activities may be included to encourage learners to evaluate their pronunciation and learning progress		
9 (2 hours)	Special reading cases	Students are able to read and write accurately words containing double ร, the vowel "ไ", and other special cases	double ร, vowel "ไ" and Other Special Cases	K: The teacher reviews learners' prior knowledge of Thai reading rules, including the pronunciation of initial consonants, vowels, final consonants, leading consonants, and consonant clusters. Learners are asked to read familiar words that follow regular reading rules and to recall how pronunciation is usually determined based on previously learned principles. This stage prepares learners to recognize deviations from standard rules W: Learners are encouraged to raise questions about Thai words that do not follow regular reading rules. Guiding questions include: How are words with double ร pronounced? Why is the vowel ไ used only in specific words? Which Thai	PDF learning materials for Session 9	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				words must be memorized as special cases? These questions help clarify learners' learning needs and objectives for the lesson L: The teacher explains special reading cases in Thai, including the reading patterns of words containing double ร, the use of the vowel ไ in a limited number of words, and other irregular pronunciation cases. Learners study examples of each case and practice identifying and reading these words correctly. Learners then summarize the characteristics of special cases and explain why memorization is necessary for accurate reading Plus: Learners participate in reinforcement activities to consolidate their understanding of special reading cases, such as reading aloud words containing double ร, and the vowel ไ; categorizing words into regular and special cases; completing short quizzes or matching exercises; and practicing writing words with correct pronunciation awareness. Reflective activities may be included to help learners reflect on difficulties and strategies for remembering special cases		

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
Action Cycle 3 consisted of the following lesson plans						
10 (2 hours)	Thai marks and symbols	Students correctly use Thai marks	Thai marks and symbols	K: The teacher activates learners' prior knowledge by asking them to recall their experiences encountering Thai marks and symbols in written texts. Learners are shown examples of words and sentences containing symbols such as ์, ๆ, and ฯ, and are asked whether they have seen these symbols before and how they previously attempted to read or understand them. This stage helps learners connect their prior reading experiences to the new less W: Learners are encouraged to identify and express their questions about Thai marks and symbols. Guiding questions include: What does each symbol mean? Does this symbol affect pronunciation? When and how should each symbol be used in Thai writing? Learners' questions are recorded to clarify learning objectives and learning needs for the lesson L: The teacher explains common Thai marks and symbols, including the karan mark (์), the reduplication mark (ๆ), the abbreviation mark (ฯ), and other related symbols. The functions of each symbol and their effects on pronunciation, meaning, or sentence structure are explained in detail.	PDF learning materials for Session 10	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Learners study examples of words and sentences containing these symbols and summarize the functions and usage of each mark Plus: Learners participate in reinforcement activities to consolidate their understanding of Thai marks and symbols. Activities include analyzing words and sentences containing symbols, matching each symbol with its function, choosing correct interpretations, reading sentences with appropriate understanding, and practicing writing short words or sentences using the symbols correctly. Reflective activities may also be included to help learners reflect on difficulties and strategies for remembering symbol usage		
11 (2 hours)	Reading words with ฤ and ฑ	Students are able to read and write accurately words containing ฤ and ฑ	Words containing ฤ and ฑ	K: The teacher activates learners' prior knowledge by presenting several Thai words containing ฤ and ฑ (e.g., ฤดู, ฤทธิ์, บัณฑิต). Learners are asked whether they have encountered these words before and to attempt reading them aloud based on their existing knowledge of Thai consonants, vowels, and basic reading rules. The teacher observes learners' responses and common pronunciation errors to identify gaps in prior knowledge	PDF learning materials for Session 11	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				W: The teacher encourages learners to express their learning needs and questions related to the pronunciation of ฤ and ฑ. Guiding questions are provided, such as: “How is ฤ pronounced in different words?” and “Why is ฑ pronounced differently from other Thai consonants?” Learners formulate questions and expectations about the reading rules for these special cases, which are recorded and used to set lesson objectives L: The teacher explains the pronunciation rules and linguistic characteristics of ฤ and ฑ in Thai. Learners study how ฤ functions as a special vowel sound and how its pronunciation varies depending on word structure, as well as how ฑ is pronounced as /d/ in words of Pali–Sanskrit origin. Examples and comparisons with regular consonant and vowel patterns are provided. Learners summarize the key reading rules and confirm their understanding through guided discussion Plus: Learners participate in reinforcement and application activities, including classifying words containing ฤ and ฑ, practicing reading aloud individually and in groups,		

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				completing short exercises to select correct pronunciations, and matching words with their phonetic representations. Additional activities may include reading words in short sentences and writing selected vocabulary to reinforce accurate reading and retention of the learned rules		
12 (2 hours)	Pali and Sanskrit loanwords	Students can correctly read and write Pali and Sanskrit loanwords	Pali and Sanskrit–derived words	K: The teacher activates learners' prior knowledge by reviewing previously learned Thai reading principles, including consonants, vowels, final consonants, tone rules, leading consonants, consonant clusters, and special reading cases. Learners are shown several commonly used Thai words of Pali and Sanskrit origin and are asked whether they have encountered these words before and how they attempted to read them based on their existing knowledge W: Learners are encouraged to express their learning needs and questions related to Pali and Sanskrit loanwords in Thai. Guiding questions include: How can we identify Thai words derived from Pali and Sanskrit? Why do some letters remain silent? Why are these words often long or complex? How should such words be read correctly? Learners' questions are recorded to clarify learning objectives for the lesson	PDF learning materials for Session 12	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table 3.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				L: The teacher explains the characteristics of Thai words derived from Pali and Sanskrit, including common orthographic patterns, the presence of silent letters, consonant clusters, and distinctive pronunciation rules. Learners study representative examples and practice reading these words accurately. At the end of this stage, learners summarize key characteristics and basic reading principles of Pali and Sanskrit words in Thai Plus: Learners engage in reinforcement and application activities to consolidate their understanding. Activities include classifying Thai native words and Pali–Sanskrit words, reading words aloud syllable by syllable, completing exercises based on reading rules, and reading Pali–Sanskrit words in short sentences. Writing exercises are also used to reinforce word forms and support long-term retention. Learners reflect on their learning and difficulties encountered during reading		
24 hours	Total					

3.3.1.5 The lesson plans were revised in accordance with the experts' recommendations, and deficiencies in the documentation and referencing were corrected. The five experts were as follows:

3.3.1.6 Validation of the Lesson Plans

The twelve lesson plans developed using KWL Plus learning activities to enhance Thai reading and writing abilities of Vietnamese students were submitted to five experts for quality evaluation. The evaluation focused on content appropriateness, alignment with research objectives, suitability of learning activities, and appropriateness of measurement and assessment. A five-point rating scale was used as the evaluation instrument.

The scoring criteria were as follows:

5 = Very highly appropriate

4 = Highly appropriate

3 = Moderately appropriate

2 = Slightly appropriate

1 = Least appropriate

The researcher analyzed the experts' evaluations by calculating the mean score for each lesson plan and comparing the results with the interpretation criteria proposed by Boonchom Srisard (2017):

4.51–5.00 = Very highly appropriate

3.51–4.50 = Highly appropriate

2.51–3.50 = Moderately appropriate

1.51–2.50 = Slightly appropriate

1.00–1.50 = Least appropriate

Lesson plans were considered appropriate for use in the study if the mean score ranges from 3.51–5.00, indicating a high to very high level of quality.

3.3.1.7 Implementation of the Lesson Plans in the Research After passing the quality evaluation based on the established criteria, the finalized lesson plans were implemented with the sample group according to the procedures of action research.

3.3.2 Evaluation Tools

The research entitled "The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students" aims to develop learning activities based on the KWL Plus process in order to enhance Thai reading and writing abilities among Vietnamese students. Therefore, the evaluation tools employed

in this study must be capable of comprehensively assessing learning achievement in Thai reading and writing, in alignment with the learning objectives, the content of all 12 lessons, and the context of learners who are beginners in Thai as a foreign language (A0 level).

The evaluation tools used in this study consisted of a Thai reading and writing achievement test. The researcher systematically constructed and validated the quality of the instrument following established procedures, as detailed below.

3.3.2.1 Thai Reading and Writing Achievement Test

The Thai reading and writing achievement test was developed by the researcher to assess the Thai reading and writing abilities of Vietnamese students after they had participated in learning activities based on the KWL Plus process. The test covered the content of all 12 lessons, including Thai consonants, vowels, reading words with initial and final consonants, tone marks, leading consonants, consonant clusters, difficult word patterns, special reading cases, and words derived from Pali and Sanskrit.

The test had a total score of 100 points and was divided into two parts as follows:

Part 1: Assessed reading ability using 46 multiple-choice questions with four answer options (46 points).

Part 2: Assessed writing ability using 6 essay questions (54 points).

Table 3.2 Content analysis of learning objectives and the number of test items in the Thai reading achievement test for Vietnamese students

Lesson	Learning content	Learning objectives	Number of multiple-choice questions		Essay questions
			Develop	Actual use	
1	Thai consonant system and three consonant classes	Students can classify the three consonant classes and read/write basic consonants	6	4	2
2	Thai vowels and their positions	Students can read and write vowels in different positions	6	4	
3	Blending initial consonants with vowels	Students can accurately read and write open syllables	6	4	
4	Final consonants and vowel modifications	Students are able to remember the final consonant groups and the forms of modified vowels	6	4	

(Continued)

Table 3.2 (Continued)

Lesson	Learning content	Learning objectives	Number of multiple-choice questions		Essay questions
			Develop	Actual use	
5	Reading words with final consonants	Students can accurately read and write words with final consonants	6	4	
6	Thai tones	Students can read and write tonal words correctly	6	4	2
7	Leading consonants	Students can read and write words with leading consonants	6	4	
8	Consonant clusters	Students can read and write words with consonant clusters	6	4	
9	Special reading cases	Students are able to read and write accurately words containing double ร, the vowel "ไ", and other special cases	6	4	
10	Thai marks and symbols	Students correctly use Thai marks	5	3	2
11	Reading words with ฤ and ฑ	Students are able to read and write accurately words containing ฤ and ฑ	5	3	
12	Pali and Sanskrit loanwords	Students can correctly read and write Pali and Sanskrit loanwords	6	4	
Total			70	46	6

Table 3.3 Individual Worksheet Assessment Criteria (Writing Skills of Vietnamese Students)

Assessment Aspect	Quality Level Descriptions		
	3 (Excellent)	2 (Good)	1 (Satisfactory)
Accuracy	Students answer all questions correctly.	Students answer the questions with 2–3 incorrect answers.	Students answer the questions with more than 3 incorrect answers.
Completeness	Students answer all questions completely.	Students provide incomplete answers for 2–3 questions.	Students provide incomplete answers for more than 3 questions.
Writing According to Thai Language Rules	Students write in accordance with Thai language rules correctly and completely.	Students write according to Thai language rules correctly, but the writing is incomplete or lacks clarity.	Students write according to Thai language rules but require guidance or additional support.

Table 3.4 Scoring Rubric

Percentage (%)	Interpretation
86-100	Excellent
70-85	Good
0-69	Needs improvement

3.3.2.2 Procedures for Developing the Learning Achievement Test

The researcher developed the Thai reading and writing achievement test according to the following systematic procedures:

1) Review of Related Literature and Research

The researcher reviewed concepts, theories, and related literature on teaching Thai reading and writing for foreign learners, learning management using the KWL Plus process, curricula and lesson plans for the 12 online lessons, as well as research related to the construction of learning achievement tests. This review served as

a guideline for determining the format and characteristics of the test to ensure its suitability for beginner-level Vietnamese learners.

2) Study of Principles for Constructing Learning Achievement Tests

The researcher studied principles for constructing both objective and subjective achievement tests, including item proportion, scoring methods, and item analysis, in order to ensure that the test could effectively measure Thai reading and writing abilities.

3) Analysis of Alignment among Learning Objectives, Content, and Test Items

The researcher analyzed the relationships among the learning objectives of each lesson, the content of all 12 lessons, and the expected learning behaviors in order to determine the number and types of test items aligned with the learning objectives.

4) Construction of the Draft Test

The researcher constructed a draft version of the learning achievement test, consisting of 46 four-option multiple-choice items and using 6 essay questions. The total number of items exceeded those required for actual use in order to allow for the selection of high-quality test items in subsequent stages.

5) Content Validity Verification

The draft test was submitted to three experts in teaching Thai as a foreign language and educational measurement and evaluation to assess the congruence between test items and learning objectives using the Index of Item-Objective Congruence (IOC). The scoring criteria were as follows:

A score of +1 was assigned when the expert was confident that the item measured the learning objective.

A score of 0 was assigned when the expert was uncertain whether the item measured the learning objective.

A score of –1 was assigned when the expert was confident that the item did not measure the learning objective.

Test items with IOC values of 0.60 or higher were selected for try-out.

6) Try-out of the Test

The test was administered to approximately 30 Vietnamese students who were not part of the research sample and who had previously studied basic Thai. The purpose was to analyze the quality of the test items.

7) Item Analysis

The results of the try-out were analyzed to determine item difficulty (Difficulty Index: P), with acceptable values ranging from 0.20 to 0.80, as well as item discrimination indices. Only items with appropriate quality were selected for actual use.

8) Reliability Analysis

The selected test items were analyzed to determine the reliability of the entire test using the Kuder–Richardson Formula 20 (KR-20) (Boonchom Srisa-ard, 2017) for objective items. Reliability was interpreted according to the following criteria:

0.00–0.20: Very low or no reliability

0.21–0.40: Low reliability

0.41–0.70: Moderate reliability

0.71–1.00: High reliability

9) Finalization of the Test

The researcher prepared the final version of the Thai reading and writing achievement test for use in data collection with the research sample.

From the procedures described above, it can be concluded that the evaluation instrument used in this study was systematically developed and rigorously validated. The test demonstrated appropriateness and alignment with the research objectives and was capable of effectively measuring Thai reading and writing achievement among Vietnamese students.

3.3.3 Reflection Tools

The research entitled "The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students" aims to develop learning activities based on the KWL Plus process in order to enhance Thai reading and writing abilities of Vietnamese students. Therefore, in addition to the assessment of learning achievement, the researcher placed importance on reflecting on both the learning outcomes and the instructional process. Reflection was used as qualitative data to explain the research findings and to improve the effectiveness of learning activity implementation.

The reflection tools employed in this study consisted of three types: behavior observation forms, teaching reflection records, and interview forms. Each type of tool was systematically developed and its quality was examined, as described below.

3.3.3.1 Learner Behavior Observation Form

The learner behavior observation form was used to collect data on the behaviors of Vietnamese students during Thai language learning activities implemented

through the KWL Plus process. The observation focused on behaviors reflecting Thai reading and writing abilities, learner participation in learning activities, and the use of thinking processes in accordance with each stage of KWL Plus. The instrument was designed as a 3-level rating scale, consisting of very good, good, and fair.

The procedures for developing the learner behavior observation form were as follows:

1. Study of Related Concepts, Theories, and Documents

The researcher reviewed concepts and theories related to KWL Plus–based learning, active learning, Thai reading and writing instruction for foreign learners, and relevant research studies. This review served as a guideline for identifying observable behaviors that could be clearly defined and systematically assessed.

2. Determination of Observation Objectives and Behavioral Indicators

The objectives of behavioral observation were determined in alignment with the research objectives. The focus was placed on behaviors reflecting Thai reading and writing abilities and learner participation at each stage of the KWL Plus process, namely the K stage (What I Know), the W stage (What I Want to Know), and the L Plus stage (What I Learned and Summarizing).

3. Determination of Rating Levels and Scoring Criteria

A 3-level rating scale was established, along with clearly defined scoring criteria for each level, to ensure consistency and objectivity in behavioral observation.

4. Development of the Behavior Observation Form

The researcher developed the observation form based on the KWL Plus process and categorized the observed behaviors into three main aspects: activation of prior knowledge, questioning and knowledge exploration, and summarizing and reflecting on learning outcomes.

5. Examination of the Appropriateness of the Observation Form

The developed observation form was submitted to the thesis advisory committee to examine content accuracy, appropriateness of language, and alignment with learning behavior indicators. Revisions were made according to the suggestions provided.

6. Examination of Content Validity (IOC)

The revised observation form was submitted to five experts to evaluate the congruence between the observation items and the research objectives using the Index of Item–Objective Congruence (IOC).

The IOC scoring criteria were as follows:

A score of +1 indicated that the expert was confident that the item was congruent with the research objectives.

A score of 0 indicated uncertainty regarding the congruence.

A score of –1 indicated that the item was not congruent with the research objectives.

Observation items with IOC values ranging from 0.50 to 1.00 were selected for actual data collection.

3.3.3.2 Preparation of the Final Observation Form

Based on expert evaluations, the observation form was revised and finalized. The completed version was then prepared for use in collecting data from the research sample.

1) Teaching Reflection Record

The teaching reflection record was used to document descriptive qualitative data concerning the instructional process of KWL Plus–based learning activities across all 12 lessons. The focus was on reflecting instructional outcomes, identifying problems and obstacles, and examining learners' development in Thai reading and writing abilities.

The procedures for developing the teaching reflection record were as follows:

1. Study of Related Concepts and Theories

The researcher reviewed concepts related to teaching reflection, classroom action research, and learning management using the KWL Plus process.

2. Determination of the Objectives of Teaching Reflection

The objectives were to record learners' learning behaviors, the appropriateness of activities at each stage of the KWL Plus process, and the effectiveness of learning activities in promoting Thai reading and writing skills.

3. Development of the Teaching Reflection Record

The teaching reflection record was developed in a narrative format, with headings and structure designed to cover each stage of the KWL Plus process in every lesson.

4. Review and Revision of the Teaching Reflection Record

The draft teaching reflection record was submitted to the thesis advisory committee and experts to examine the appropriateness of content and language. Revisions were made according to their recommendations.

5. Preparation of the Final Teaching Reflection Record

The finalized teaching reflection record was prepared for use in collecting qualitative data in the research.

3.3.3.3 Learner Interview Form

The learner interview form was a structured interview used to collect data on Vietnamese students' opinions, experiences, and reflections after participating in Thai language learning activities using the KWL Plus process.

The procedures for developing the learner interview form were as follows:

1. Study of Concepts and Theories Related to Interviews

The researcher reviewed concepts related to structured interview design and qualitative research in education.

2. Determination of Interview Objectives

The objectives were to examine learners' perceptions of KWL Plus–based learning activities, the difficulty level of lessons, the development of Thai reading and writing skills, and learners' satisfaction with the learning activities.

3. Development of the Structured Interview Form

A structured interview form consisting of 10 questions was developed, covering issues related to each stage of the KWL Plus process and its effects on learners' learning outcomes.

4. Review and Revision of the Interview Form

The interview form was submitted to the thesis advisory committee and experts to review content validity and language appropriateness. Revisions were made based on their feedback.

5. Preparation of the Final Interview Form

The finalized learner interview form was prepared for use in collecting qualitative data from the research sample.

3.4 Data Collection

This study employed an action research design to develop and improve learning activities using the KWL Plus approach in order to promote Thai reading and writing abilities of Vietnamese students. The data collection process was conducted systematically through three action cycles, following the Plan–Act–Observe–Reflect framework. Both quantitative and qualitative data were collected to examine learners' achievement,

learning behaviors, and reflections on the instructional process.

3.4.1 Research Design

The research was conducted as classroom action research, consisting of three action cycles, with each cycle corresponding to a specific set of lesson plans and learning contents. The instructional process covered a total of 12 lesson plans, with an overall instructional time of 24 hours. Each action cycle concluded with an achievement test to assess Thai reading and writing abilities, along with reflective data collection to support instructional improvement in the subsequent cycle.

The details of data collection in each action cycle are described below.

Action Cycle 1

Step 1: Planning (Plan)

In this stage, the researcher planned learning activities based on the KWL Plus approach for the following lesson plans:

Lesson Plan 1: Thai Consonants and the Three Consonant Classes (2 hours)

Lesson Plan 2: Vowels and Their Positions (2 hours)

Lesson Plan 3: Reading Initial Consonants with Vowels (2 hours)

Lesson Plan 4: Final Consonants and Vowel Modifications (2 hours)

Lesson Plan 5: Reading with Final Consonants (2 hours)

The researcher reviewed the learning objectives, lesson contents, and instructional activities to ensure alignment with the objectives of promoting Thai reading and writing abilities. An achievement test and reflection tools for Action Cycle 1 were also prepared.

Step 2: Action (Act)

The researcher implemented the KWL Plus–based learning activities according to the lesson plans. Learners participated in activities designed to activate prior knowledge (K), generate learning questions (W), and summarize and reflect on newly acquired knowledge (L Plus), with emphasis on reading and writing Thai.

Step 3: Observation (Observe)

During the instructional process, the researcher collected qualitative data using the behavioral observation form to record learners' participation, reading and writing performance, and engagement in each stage of the KWL Plus process. Teaching reflection records were also completed after each lesson.

Step 4: Reflection (Reflect)

At the end of Action Cycle 1, learners completed Achievement Test 1, which had a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points

The test assessed both Thai reading and writing skills. The results of the test, together with data from behavioral observations, teaching reflection records, and learner interviews, were analyzed to identify strengths, weaknesses, and instructional issues. These findings were used to revise and improve learning activities for Action Cycle 2.

Action Cycle 2

Step 1: Planning (Plan)

Based on the reflection results from Action Cycle 1, the researcher revised instructional strategies and learning activities. Lesson plans for Action Cycle 2 included:

Lesson Plan 6: Tones in Thai and Reading with Tone Marks (2 hours)

Lesson Plan 7: Leading Consonants (2 hours)

Lesson Plan 8: Consonant Clusters (2 hours)

Lesson Plan 9: Reading with Double ร, Words Using the Vowel "ไ", and Other Special Cases (2 hours)

Step 2: Action (Act)

The revised KWL Plus learning activities were implemented, emphasizing more complex reading and writing rules and providing additional practice opportunities based on learners' difficulties identified in the previous cycle.

Step 3: Observation (Observe)

Learners' behaviors and learning engagement were observed and recorded using the behavioral observation form. Teaching reflection records were completed to document instructional effectiveness and learner responses.

Step 4: Reflection (Reflect)

At the end of Action Cycle 2, learners completed Achievement Test 2, with a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points.

Quantitative test results and qualitative reflection data were analyzed to evaluate learners' progress and remaining learning challenges. The findings informed further instructional adjustments for Action Cycle 3.

Action Cycle 3

Step 1: Planning (Plan)

The researcher analyzed reflection results from Action Cycle 2 and refined learning activities accordingly. Lesson plans for Action Cycle 3 included:

Lesson Plan 10: Marks in Thai (2 hours)

Lesson Plan 11: How to Read Words with ฤ and How to Read Words with ฑ (2 hours)

Lesson Plan 12: Pali and Sanskrit Languages (2 hours)

Step 2: Action (Act)

KWL Plus–based learning activities were implemented with a focus on advanced reading and writing rules and special cases in Thai orthography.

Step 3: Observation (Observe)

Behavioral observations and teaching reflection records were collected to monitor learners' engagement, reading accuracy, writing performance, and overall learning development.

Step 4: Reflection (Reflect)

At the end of Action Cycle 3, learners completed Achievement Test 3, with a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points.

In addition, learner interviews were conducted to collect in-depth qualitative data regarding learners' perceptions, learning experiences, and satisfaction with the KWL Plus–based learning activities. All collected data were used for final analysis and interpretation.

Summary of Data Collection

In summary, data collection in this study involved:

1. Achievement tests administered at the end of each action cycle to measure Thai reading and writing abilities,

2. Behavioral observation forms to examine learners' participation and learning behaviors,

3. Teaching reflection records to document instructional processes and improvements, and

4. Learner interviews to obtain qualitative insights into learners' experiences and perceptions.

These data sources provided comprehensive evidence to evaluate the effectiveness of learning activities developed using the KWL Plus approach.

Table 3.5 Summary of Data Collection by Action Cycle

Action Cycle	Learning Activities/Lesson Plans	Data Collection Instruments	Data Collected	Purpose of Data Collection
Action Cycle 1	Lesson Plans 1–5 • Thai consonants and the three consonant classes • Vowels and their positions • Reading initial consonants with vowels • Final consonants and vowel modifications • Reading with final consonants (Total 10 hours)	1) Achievement Test 1 2) Behavioral Observation Form 3) Teaching Reflection Form	• Scores from Achievement Test 1 (70 points) – 25 multiple-choice items (25 points) – 5 essay questions (45 points) • Observation data on students' participation, reading accuracy, and writing behavior • Teaching reflection notes	• To assess students' Thai reading and writing abilities after Cycle 1 • To identify learning difficulties and common errors • To reflect on the effectiveness of KWL Plus activities for improvement in Cycle 2
Action Cycle 2	Lesson Plans 6–9 • Tones in Thai and reading with tone marks • Leading consonants • Consonant clusters • Reading double ร, vowel "ไ", and	1) Achievement Test 2 2) Behavioral Observation Form 3) Teaching Reflection Form	• Scores from Achievement Test 2 (70 points) – 25 multiple-choice items (25 points) – 5 essay questions (45 points) • Observation	• To evaluate progress in Thai reading and writing abilities after Cycle 2 • To analyze improvement compared with Cycle 1

(Continued)

Table 3.5 (Continued)

Action Cycle	Learning Activities/Lesson Plans	Data Collection Instruments	Data Collected	Purpose of Data Collection
	special cases (Total 8 hours)		data on students' reading fluency, tone accuracy, and writing performance • Teaching reflection notes	• To use reflection results to adjust teaching strategies in Cycle 3
Action Cycle 3	Lesson Plans 10–12 • Marks in Thai • How to read words with ฤ and ฑ • Pali and Sanskrit languages (Total 6 hours)	1) Achievement Test 3 2) Behavioral Observation Form 3) Teaching Reflection Form 4) Interview Form	• Scores from Achievement Test 3 (70 points) – 25 multiple-choice items (25 points) – 5 essay questions (45 points) • Observation data on overall reading and writing competence • Teaching reflection notes • Interview data on students' opinions and satisfaction	• To assess overall development of Thai reading and writing abilities • To examine the effectiveness of KWL Plus learning activities across all cycles • To collect learners' perceptions and feedback for research conclusions

3.5 Data Analysis

In this study entitled “The development of learning activity using KWL Plus to promote Thai reading and writing abilities for Vietnamese students,” the researcher analyzed the data collected from the achievement tests of Thai reading and writing skills and the reflection tools. The data analysis procedures are described as follows.

3.5.1 Analysis of Data from the Achievement Tests of Thai Reading and Writing Skills

The researcher analyzed the scores obtained from the Thai reading and writing achievement tests administered after the completion of learning activities in each action cycle. The analysis procedures were conducted as follows.

After the completion of Action Cycle 1, the scores from Test 1, which consisted of both multiple-choice and essay questions with a total score of 70 points, were analyzed. The test included 25 multiple-choice items (25 points) and 5 essay questions (45 points) designed to assess both Thai reading and writing abilities. The students’ scores were calculated and compared with the predetermined criterion of 70 percent. Students who achieved a score of 70 percent or higher were considered to have met the achievement criterion.

After the completion of Action Cycle 2, the scores from Test 2, which had the same structure and total score as Test 1, were analyzed. The results were used to examine the development of students’ Thai reading and writing abilities after participating in the KWL Plus–based learning activities in the second action cycle. The scores were calculated in terms of mean and percentage and compared with the 70 percent criterion.

After the completion of Action Cycle 3, the scores from Test 3, which also consisted of 25 multiple-choice items and 5 essay questions with a total score of 70 points, were analyzed. The results were used to evaluate the overall learning achievement in Thai reading and writing skills after the students had completed all three action cycles. The scores were analyzed using descriptive statistics, including mean scores and percentages, and were compared with the criterion of 70 percent.

The comparison of achievement test results across the three action cycles was used to examine the progression and improvement of Thai reading and writing abilities among Vietnamese students as a result of the KWL Plus learning activities.

3.5.2 Analysis of Data from the Thai Reading and Writing Achievement Test

In addition to the achievement tests administered at the end of each action cycle, the researcher also analyzed data obtained from the Thai reading and writing achievement test, which was designed as a comprehensive assessment tool as described in Section.

The achievement test consisted of two parts.

Part 1: Assessed reading ability using 46 multiple-choice questions with four answer options (46 points).

Part 2: Assessed writing ability using 6 essay questions (54 points).

The scores from each section were calculated separately and then combined to obtain the total achievement score. The results were analyzed using descriptive statistics, including mean scores, percentages, and standard deviation, in order to examine students' overall achievement in Thai reading and writing skills after participating in the learning activities based on the KWL Plus approach.

The students' achievement scores were then compared with the predetermined criterion of 70 percent. Students who achieved scores equal to or higher than 70 percent were considered to have met the achievement criterion. The results of this analysis were used to determine the effectiveness of the KWL Plus learning activities in promoting Thai reading and writing abilities among Vietnamese students.

3.5.3 Analysis of Qualitative Data from Reflection Tools

Qualitative data obtained from the behavioral observation form, teaching reflection/teaching record form, and interview form were analyzed using content analysis.

The data from the behavioral observation form were analyzed to examine students' learning behaviors, including participation in KWL Plus activities, engagement in reading and writing tasks, accuracy in reading aloud and writing Thai words and sentences, and learning motivation during each action cycle.

The data from the teaching reflection and teaching record forms were analyzed to reflect on the effectiveness of the learning activities, identify strengths and limitations of the KWL Plus–based instruction, and provide information for improving instructional practices in subsequent action cycles.

The data from the interview form were analyzed to explore students' opinions, perceptions, and satisfaction toward the learning activities using KWL Plus, as well as their perceived development in Thai reading and writing abilities after completing the learning activities.

3.5.4 Synthesis of Quantitative and Qualitative Data

The researcher synthesized the results from both quantitative data obtained from the achievement tests and qualitative data obtained from the reflection tools to provide a comprehensive interpretation of the effectiveness of the KWL Plus learning activities. The integrated analysis was used to explain how the learning activities contributed to the development of Thai reading and writing abilities among Vietnamese students and served as a basis for discussing the research findings in the subsequent chapter.

3.6 Statistics used in data analysis

In this study, the researcher employed the following statistical methods for data analysis.

3.6.1 Statistics for Determining the Quality of Research Instruments

3.6.1.1 Content Validity of Individual Test Items

The content validity of each test item was examined using the Index of Item–Objective Congruence (IOC). The formula used to calculate IOC is as follows:

$$IOC = \frac{\sum R}{n} \tag{3-1}$$

When:

IOC = Index of Item–Objective Congruence

$\sum R$ = the total scores of congruence ratings given by each expert for each item

n = the number of experts evaluating the congruence of the item

3.6.2 Statistics for Data Analysis

3.6.2.1 Percentage

Percentage was calculated using the following formula:

$$P = \frac{f}{N} \times 100 \tag{3-2}$$

When:

P = percentage

f = the frequency of the observed value

N = the total number

3.6.2.2 Arithmetic Mean

The arithmetic mean was calculated using the following formula:

$$\overline{X} = \frac{\sum X}{N} \quad (3\text{-}3)$$

When:

$\overline{X}$ = mean score of the target group

$\sum X$ = total scores obtained by the target group

N = number of students in the target group

3.6.2.3 Standard Deviation

The standard deviation was calculated using the following formula:

$$S = \sqrt{\frac{\sum_{i=1}^{n} (X_i - \overline{X})^2}{n-1}} \quad (3\text{-}4)$$

When:

S = Standard deviation of the sample

$\overline{X}$ = Arithmetic mean of the target group's scores

X_i = Number of student points

n = number of students in the target group

CHAPTER 4
RESEARCH RESULTS

This research, "The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students," was conducted with data analysis and presented in the following order:

1. Symbols used in presenting the data analysis results
2. Steps in presenting the data analysis results
3. Results of the data analysis

4.1 Symbols used in presenting the data analysis results

To ensure a common understanding in presenting and interpreting the results of data analysis, the researcher defined the following symbols:

N = represents the number of students in the target group

$\overline{X}$ = represents the mean

$S.D.$ = represents the standard deviation

4.2 Steps in presenting the data analysis results

The researcher presents the data analysis results in the following order:

Part 1: The development of Thai reading and writing abilities of Vietnamese students using KWL Plus learning activities

Part 2: The learning achievement in Thai reading and writing of Vietnamese students after using KWL Plus learning activities

4.3 Results of the data analysis

Part 1: Development of Thai Reading and Writing Abilities

The implementation results based on action research were divided into three action cycles as follows:

Action Cycle 1

This cycle consisted of Lesson Plans 1–5:

Lesson Plan 1: Thai Consonants and the Three Consonant Classes

Lesson Plan 2: Vowels and Their Positions

Lesson Plan 3: Reading Initial Consonants with Vowels

Lesson Plan 4: Final Consonants and Vowel Modifications

Lesson Plan 5: Reading with Final Consonants

Procedures

1. Plan: The researcher reviewed the learning objectives, lesson contents, and instructional activities to ensure alignment with the objectives of promoting Thai reading and writing abilities. An achievement test and reflection tools for Action Cycle 1 were also prepared.

2. Act: The researcher implemented the KWL Plus–based learning activities according to the lesson plans. Learners participated in activities designed to activate prior knowledge (K), generate learning questions (W), and summarize and reflect on newly acquired knowledge (L Plus), with emphasis on reading and writing Thai.

3. Observe: During the instructional process, the researcher collected qualitative data using the behavioral observation form to record learners' participation, reading and writing performance, and engagement in each stage of the KWL Plus process. Teaching reflection records were also completed after each lesson.

4. Reflect: At the end of Action Cycle 1, learners completed Achievement Test 1, which had a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points The test assessed both Thai reading and writing skills. The results of the test, together with data from behavioral observations, teaching reflection records, and learner interviews, were analyzed to identify strengths, weaknesses, and instructional issues. These findings were used to revise and improve learning activities for Action Cycle 2.

Qualitative Findings from Behavioral Observation Form

Table 4.1 Summary of Behavioral Observation Results in Action Cycle 1

Assessment Aspect	Mean Score (5)	Interpretation
Participation in Learning Activities (KWL Plus)	4.33	Very Good
Collaboration with Others	4.17	Very Good
Problem Analysis	4.00	Very Good
Problem Solving	4.00	Very Good
Positive Attitude toward Thai Learning	4.67	Excellent
Responsibility	4.50	Excellent
Total Mean Score (30)	25.67	Excellent

Passing Criterion: At least 21 points (70%)

As shown in Table 4.1, the students obtained an average behavioral observation score of 25.67 out of 30 points, which exceeded the predetermined criterion of 21 points. The results were classified at the Excellent level. Students demonstrated particularly strong performance in positive attitude toward Thai learning and responsibility. However, problem analysis and problem-solving skills received comparatively lower scores, indicating areas requiring further instructional support.

During Action Cycle 1, the behavioral observation data revealed that most students actively participated in the KWL Plus learning activities. During the K (Know) stage, students were able to share limited prior knowledge about Thai consonants and vowels. However, several students demonstrated hesitation when explaining Thai reading rules because they had little previous experience with the Thai writing system.

In the W (Want to Know) stage, students expressed strong interest in learning how Thai consonants, vowels, and final consonants function together in word formation. Observation records indicated that students frequently asked questions regarding vowel placement and final consonant pronunciation, suggesting high learning motivation and curiosity.

During the L (Learned) and Plus stages, students were able to summarize newly learned knowledge and complete concept-mapping activities. Nevertheless, some students still experienced difficulties distinguishing similar consonants and applying reading rules when encountering unfamiliar words. Writing activities also revealed

spelling errors related to vowel placement and final consonant usage.

Overall, the observation data suggested that students demonstrated positive engagement and active participation, although their reading and writing accuracy still required further development.

Qualitative Findings from Student Interviews

Table 4.2 Summary of Student Interview Results in Action Cycle 1

Interview Question	Summary of Students' Responses
Feelings toward learning Thai through KWL Plus	Most students reported positive feelings toward the learning activities and found the lessons more enjoyable and engaging than traditional instruction.
Difficulties before using KWL Plus	Students reported difficulties in recognizing Thai consonants, vowels, final consonants, and applying pronunciation rules correctly.
Benefits of the "K" stage	Students stated that activating prior knowledge helped them connect previous learning with new content and improved lesson comprehension.
Benefits of the "W" stage	Students reported increased curiosity and stronger motivation to learn Thai because they could identify what they wanted to learn.
Benefits of the "L" stage	Students indicated that reviewing and summarizing learned content helped them remember Thai reading and writing rules more effectively.
Benefits of the "Plus" activities	Students found summarizing, concept mapping, and writing activities useful for organizing knowledge and reinforcing learning.

(Continued)

Table 4.2 (Continued)

Interview Question	Summary of Students' Responses
Improvement in reading ability	Most students believed their reading ability had improved, although some still lacked confidence when reading unfamiliar words.
Improvement in writing ability	Students reported improvement in writing accuracy but still experienced occasional spelling errors.
Most preferred aspect of KWL Plus	Students particularly enjoyed group discussions, sharing ideas, and completing KWL charts.
Suggestions for improvement	Students suggested providing additional practice activities and more examples of Thai reading and writing exercises.

The interview data collected at the end of Action Cycle 1 indicated that students had positive attitudes toward the KWL Plus learning activities.

Several students reported that the KWL chart helped them organize their thoughts before learning and made it easier to connect previous knowledge with new content.

Students also stated that summarizing knowledge in the Plus stage helped them remember Thai reading rules more effectively.

However, many students mentioned that they still felt confused about: final consonants, vowel modifications, pronunciation differences between similar Thai consonants.

Some students expressed a lack of confidence when reading unfamiliar words independently.

These findings suggest that while students benefited from the KWL Plus approach, additional instructional support and practice opportunities were necessary for more complex reading and writing skills.

Table 4.3 Learning behavior evaluation results using KWL Plus (Action Cycle 1)

No.	Reading skills test (25)	Writing skills test (45)	Total (70)	Percentage	Evaluation
1	24	39	63	90	Excellent
2	23	36	59	84.29	Good
3	23	35	58	82.86	Good
4	25	37	62	88.57	Excellent
5	24	31	55	78.57	Good
6	24	31	55	78.57	Good
$\overline{X}$	23.83	34.83	58.67	83.81	-
S.D.	0.75	3.31	3.20	4.57	-

Evaluation Criteria:

86–100% = Excellent

70–85% = Good

0–69% = Needs Improvement

From Table 4.3, the quantitative results showed an average score of 83.81%, which exceeded the predetermined criterion of 70 percent and indicated that the learning activities were effective.

The qualitative findings supported these results by demonstrating that students actively participated in learning activities and showed increased awareness of Thai reading and writing principles.

Strengths of Action Cycle 1

Students actively participated in KWL discussions.

Students showed strong motivation to learn Thai.

The KWL Plus process helped students connect prior knowledge with new knowledge.

Most students successfully understood basic Thai reading and writing concepts.

Weaknesses of Action Cycle 1

Students still struggled with final consonants and vowel modifications.

Some students lacked confidence when reading unfamiliar words.

Writing accuracy remained inconsistent among several learners.

Improvements for Action Cycle 2

Based on the reflection findings, the researcher decided to:

Increase guided reading practice.

Provide additional exercises on difficult reading rules.

Offer immediate corrective feedback during writing activities.

Use more examples and visual summaries in the Plus stage.

Encourage peer discussion to strengthen understanding.

Action Cycle 2

This cycle consisted of Lesson Plans 6–9:

Lesson Plan 6: Tones in Thai and Reading with Tone Marks

Lesson Plan 7: Leading Consonants

Lesson Plan 8: Consonant Clusters

Lesson Plan 9: Reading with Double ร, Words Using the Vowel "ไ", and Other Special Cases

The procedures followed the same steps: Plan–Act–Observe–Reflect

Procedures

1. Plan: Based on the reflection results from Action Cycle 1, the researcher revised instructional strategies and learning activities.

2. Act: The revised KWL Plus learning activities were implemented, emphasizing more complex reading and writing rules and providing additional practice opportunities based on learners' difficulties identified in the previous cycle.

3. Observe: Learners' behaviors and learning engagement were observed and recorded using the behavioral observation form. Teaching reflection records were completed to document instructional effectiveness and learner responses.

4. Reflect: At the end of Action Cycle 2, learners completed Achievement Test 2, with a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points.

Quantitative test results and qualitative reflection data were analyzed to evaluate learners' progress and remaining learning challenges. The findings informed further instructional adjustments for Action Cycle 3.

Qualitative Findings from Behavioral Observation Form

Table 4.4 Summary of Behavioral Observation Results in Action Cycle 2

Assessment Aspect	Mean Score (5)	Interpretation
Participation in Learning Activities (KWL Plus)	4.67	Excellent
Collaboration with Others	4.50	Excellent
Problem Analysis	4.33	Very Good
Problem Solving	4.33	Very Good
Positive Attitude toward Thai Learning	4.83	Excellent
Responsibility	4.67	Excellent
Total Mean Score (30)	27.33	Excellent

Passing Criterion: At least 21 points (70%)

Table 4.4 shows that the mean behavioral observation score increased to 27.33 points. The improvement reflected greater learner participation, stronger collaboration, increased confidence, and more effective application of KWL Plus learning strategies. Positive attitude toward Thai learning remained the highest-rated aspect.

Observation data from Action Cycle 2 showed a noticeable improvement in students' participation, confidence, and learning performance.

Students demonstrated greater independence during KWL activities and were able to generate more meaningful questions during the W stage.

During reading activities, students showed improved ability to apply tone rules, leading consonants, and consonant clusters. They also completed writing tasks with fewer spelling errors than in Action Cycle 1.

The Plus activities revealed that students were increasingly capable of organizing complex information and summarizing Thai reading rules accurately.

Qualitative Findings from Student Interviews

Table 4.5 Summary of Student Interview Results in Action Cycle 2

Interview Question	Summary of Students' Responses
Feelings toward learning Thai through KWL Plus	Students expressed greater satisfaction and confidence compared with Action Cycle 1.
Difficulties before using KWL Plus	Students reported that many of their previous difficulties had been reduced through continued practice.
Benefits of the "K" stage	Students were able to connect prior knowledge with more complex reading and writing content.
Benefits of the "W" stage	Students generated more meaningful questions and demonstrated stronger learning motivation.
Benefits of the "L" stage	Students reported improved retention of tone rules, consonant clusters, and reading patterns.
Benefits of the "Plus" activities	Students stated that concept maps and summaries helped them understand difficult content more clearly.
Improvement in reading ability	Most students reported noticeable improvement in reading fluency and confidence.
Improvement in writing ability	Students demonstrated greater writing accuracy and fewer spelling mistakes.
Most preferred aspect of KWL Plus	Students particularly liked collaborative learning activities and visual summaries.
Suggestions for improvement	Students recommended additional practice for advanced reading rules and special pronunciation cases.

Students reported that the additional practice activities introduced after Action Cycle 1 helped them better understand difficult concepts.

Several students stated that:

"The summary charts and concept maps helped us remember tone rules more easily."

Students also indicated that they felt more confident reading Thai aloud and writing new vocabulary independently.

However, some learners still experienced difficulties when dealing with special reading cases and irregular pronunciation patterns.

Table 4.6 Learning behavior evaluation results using KWL Plus (Action Cycle 2)

No.	Reading skills test (25)	Writing skills test (45)	Total (70)	Percentage	Evaluation
1	23	43	66	94.29	Excellent
2	23	43	66	94.29	Excellent
3	22	37	59	84.29	Good
4	21	43	64	91.43	Excellent
5	21	42	63	90	Excellent
6	24	34	58	82.86	Good
$\overline{X}$	22.33	40.33	62.67	89.53	-
S.D.	1.21	3.88	3.44	4.91	-

Evaluation Criteria:

86–100% = Excellent

70–85% = Good

0–69% = Needs Improvement

From Table 4.6 The average score increased from 83.81% to 89.53%. The improvement can be explained by both quantitative and qualitative evidence. The modifications introduced after Action Cycle 1 successfully addressed many of the learning difficulties previously identified. Students demonstrated: higher confidence, better reading fluency, stronger writing accuracy, more active participation.

Strengths of Action Cycle 2

Significant improvement in reading and writing performance.

Increased learner confidence.

Better application of Thai reading rules.

More effective use of KWL Plus learning strategies.

Weaknesses of Action Cycle 2

Some students still struggled with advanced reading rules.

Special cases remained challenging.

Individual differences in learning pace were still evident.

Improvements for Action Cycle 3

The researcher planned to:

Increase scaffolding for advanced content.

Provide additional review sessions before introducing complex topics.

Use more examples of authentic Thai words.

Strengthen individualized support for weaker students.

Action Cycle 3

This cycle consisted of Lesson Plans 10–12:

Lesson Plan 10: Marks in Thai

Lesson Plan 11: How to Read Words with ฤ and How to Read Words with ฑ

Lesson Plan 12: Pali and Sanskrit Languages

The procedures followed the same steps: Plan – Act – Observe – Reflect

Procedures

1. Plan: The researcher analyzed reflection results from Action Cycle 2 and refined learning activities accordingly.

2. Act: KWL Plus–based learning activities were implemented with a focus on advanced reading and writing rules and special cases in Thai orthography.

3. Observe: Behavioral observations and teaching reflection records were collected to monitor learners' engagement, reading accuracy, writing performance, and overall learning development.

4. Reflect: At the end of Action Cycle 3, learners completed Achievement Test 3, with a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points.

In addition, learner interviews were conducted to collect in-depth qualitative data regarding learners' perceptions, learning experiences, and satisfaction with the KWL Plus–based learning activities. All collected data were used for final analysis and interpretation.

Qualitative Findings from Behavioral Observation Form

Table 4.7 Summary of Behavioral Observation Results in Action Cycle 3

Assessment Aspect	Mean Score (5)	Interpretation
Participation in Learning Activities (KWL Plus)	4.67	Excellent
Collaboration with Others	4.50	Excellent
Problem Analysis	4.50	Very Good
Problem Solving	4.17	Very Good
Positive Attitude toward Thai Learning	4.83	Excellent
Responsibility	4.67	Excellent
Total Mean Score (30)	27.34	Excellent

Passing Criterion: At least 21 points (70%)

As presented in Table 4.7, students continued to demonstrate excellent learning behaviors, obtaining an average score of 27.34 points. Although Achievement Test scores showed a slight decrease compared with Action Cycle 2, observation results remained consistently high. This finding suggests that students maintained strong engagement, responsibility, and motivation throughout the learning process. The slight decline in test performance was therefore more likely associated with increased content difficulty rather than reduced learner participation or motivation.

Observation records indicated that students remained highly engaged throughout Action Cycle 3.

Students actively participated in KWL discussions and demonstrated strong effort when learning advanced topics such as Thai marks, words containing ฤ and ฑ, and vocabulary derived from Pali and Sanskrit.

However, observation data also revealed that these topics required more analytical thinking and memorization than previous lessons. Some students needed additional time to process unfamiliar vocabulary and apply advanced reading rules accurately.

Although students remained motivated, minor increases in reading and writing errors were observed when compared with Action Cycle 2.

Qualitative Findings from Student Interviews

Table 4.8 Summary of Student Interview Results in Action Cycle 3

Interview Question	Summary of Students' Responses
Feelings toward learning Thai through KWL Plus	Students remained highly satisfied with the learning activities and considered them beneficial for learning Thai.
Difficulties before using KWL Plus	Students recognized substantial improvement compared with the beginning of the study.
Benefits of the "K" stage	Students reported that activating prior knowledge helped them understand more advanced Thai language content.
Benefits of the "W" stage	Students remained motivated and interested in learning challenging topics.
Benefits of the "L" stage	Students stated that summarizing learned knowledge helped them understand difficult reading and writing rules more effectively.
Benefits of the "Plus" activities	Students found concept mapping and writing activities particularly useful for organizing complex information.
Improvement in reading ability	All students reported noticeable improvement in Thai reading ability.
Improvement in writing ability	Most students reported increased confidence and accuracy in Thai writing.
Most preferred aspect of KWL Plus	Students appreciated the interactive and student-centered nature of the KWL Plus activities.

(Continued)

Table 4.8 (Continued)

Interview Question	Summary of Students' Responses
Suggestions for improvement	Students recommended providing additional practice opportunities for advanced vocabulary, Pali–Sanskrit words, and complex reading rules.

Students generally expressed satisfaction with the KWL Plus learning activities.

Many students reported that: they had gained greater confidence in reading Thai, they could recognize more Thai words, they understood Thai spelling patterns better than before.

However, several students stated that the content in Action Cycle 3 was considerably more difficult than the content in previous cycles.

Students specifically mentioned challenges related to: Pali-Sanskrit vocabulary, words containing ฎ, irregular pronunciation patterns, exceptions to standard reading rules. Despite these challenges, students believed that the KWL Plus activities helped them understand difficult content more effectively than traditional teaching methods.

Table 4.9 Learning behavior evaluation results using KWL Plus (Action Cycle 3)

No.	Reading skills test (25)	Writing skills test (45)	Total (70)	Percentage	Evaluation
1	24	45	69	98.57	Excellent
2	23	34	57	81.43	Good
3	20	35	55	78.57	Good
4	21	41	62	88.57	Excellent
5	23	37	60	85.71	Good
6	24	42	66	94.29	Excellent
$\underline{x}$	22.5	39	61.5	87.86	-
S.D.	1.52	4.20	5.32	7.59	-

Evaluation Criteria:

86–100% = Excellent

70–85% = Good

0–69% = Needs Improvement

From Table 4.9, Although the average score in Action Cycle 3 (87.86%) was slightly lower than the average score in Action Cycle 2 (89.53%), the result remained at the Excellent level and substantially exceeded the predetermined criterion of 70 percent.

The slight decrease should not be interpreted as a decline in learning effectiveness. Instead, it can be explained by the increased complexity of the instructional content in Action Cycle 3.

The topics introduced in Action Cycle 3, including Thai marks, words containing ฤ and ฑ, and Pali–Sanskrit vocabulary, are generally regarded as more difficult than the topics taught in the previous cycles. These topics involve numerous exceptions, irregular pronunciation patterns, and advanced orthographic rules that require higher levels of cognitive processing and language awareness.

Evidence from behavioral observations and student interviews indicated that students remained highly motivated and actively engaged throughout the learning process. However, many students reported that the advanced content required more time for practice and consolidation.

Therefore, the slight reduction in the mean score is likely attributable to increased content difficulty rather than reduced learning effectiveness. Importantly, students maintained a high level of achievement, with an average score of 87.86 percent, demonstrating that the KWL Plus learning activities continued to effectively support Thai reading and writing development even when students encountered more challenging learning materials.

Recommendations for Future Implementation

To ensure more consistent improvement across all action cycles, future implementations should consider the following recommendations:

1. Provide systematic review sessions before introducing highly complex content.

2. Allocate additional instructional time for advanced topics such as Pali–Sanskrit vocabulary and special reading rules.

3. Develop supplementary practice materials that gradually increase difficulty levels.

4. Use differentiated instruction to provide additional support for learners who require more time to master complex concepts.

5. Incorporate more formative assessments throughout the learning process to identify learning difficulties early.

6. Expand the Plus stage by requiring students to create personalized summary charts and concept maps for advanced reading rules.

7. Integrate spaced-review activities across cycles to strengthen long-term retention of previously learned content.

8. Increase opportunities for peer discussion and collaborative problem-solving during complex lessons.

By implementing these strategies, future groups of learners may achieve more stable and continuous improvement throughout all action cycles, reducing the likelihood of score fluctuations when more advanced content is introduced.

Part 2: Learning Achievement Results

The achievement test consisted of two parts.

Part 1: Assessed reading ability using 46 multiple-choice questions with four answer options (46 points).

Part 2: Assessed writing ability using 6 essay questions (54 points).

The scores from each section were calculated separately and then combined to obtain the total achievement score. The results were analyzed using descriptive statistics, including mean scores, percentages, and standard deviation, in order to examine students' overall achievement in Thai reading and writing skills after participating in the learning activities based on the KWL Plus approach.

The students' achievement scores were then compared with the predetermined criterion of 70 percent. Students who achieved scores equal to or higher than 70 percent were considered to have met the achievement criterion. The results of this analysis were used to determine the effectiveness of the KWL Plus learning activities in promoting Thai reading and writing abilities among Vietnamese students.

The results of the achievement test in Thai reading and writing (total score: 100 points) are presented as follows:

Table 4.10 Student Achievement Results after Learning Activities using KWL Plus

No.	Achievement Test Scores (100)		Total (100)	Percentage	Evaluation
	Reading skills test (46)	Writing skills test (54)			
1	43	52	95	95	Excellent
2	42	43	85	85	Good
3	39	53	92	92	Excellent
4	39	52	91	91	Excellent
5	40	52	92	92	Excellent
6	36	44	80	80	Good
$\overline{X}$	39.83	49.33	89.17	89.17	-
S.D.	2.41	4.13	5.08	5.08	-

Evaluation Criteria:

86–100% = Excellent

70–85% = Good

0–69% = Needs Improvement

From Table 4.10, it was found that the students achieved an average score of 89.17%, which is at the Excellent level. Most students performed at an excellent level, while a few were at the good level. This indicates that the KWL Plus learning activities were highly effective in improving students' overall Thai reading and writing achievement.

Overall, the results from all tables indicate that the KWL Plus learning activities significantly improved students' Thai reading and writing abilities. The continuous improvement across action cycles and the high achievement scores confirm the effectiveness of the instructional approach.

CHAPTER 5
CONCLUSION AND DISCUSSION

The research entitled “The Development of Learning Activities Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students” was an action research study aimed at developing learning activities using the KWL Plus technique to enhance Thai reading and writing abilities among Vietnamese students. The researcher conducted the study based on the action research process proposed by Kemmis and McTaggart, which consists of four stages: Planning, Action, Observation, and Reflection. The study was carried out through three action research cycles, and the outcomes were evaluated through learning behaviors, Thai reading and writing abilities, as well as learning achievement. After completing the research process, the researcher was able to summarize the findings, discuss the results, and provide recommendations as follows.

5.1 Conclusion

5.1.1 The Vietnamese students’ Thai reading and writing abilities improved through the use of KWL Plus learning activities across the three action cycles. In Action Cycle 1, the students achieved an average score of 58.67 out of 70 points, accounting for 83.81 percent (*S.D.*=4.57), which was at the Good level. Two students achieved the Excellent level, while four students achieved the Good level. In Action Cycle 2, the average score increased to 62.67 out of 70 points, accounting for 89.53 percent (*S.D.*=4.91), which was at the Excellent level. Four students achieved the Excellent level, while two students achieved the Good level. In Action Cycle 3, the students achieved an average score of 61.50 out of 70 points, accounting for 87.86 percent (*S.D.*=7.59), which was also at the Excellent level. Three students achieved the Excellent level, while three students achieved the Good level. The findings indicated that the KWL Plus learning activities effectively promoted students’ Thai reading and writing abilities throughout the three action cycles.

5.1.2 The learning achievement of Vietnamese students after participating in KWL Plus learning activities was higher than the 70 percent criterion. The students achieved an average score of 89.17 out of 100 points, accounting for 89.17 percent (*S.D.*=5.08),

which was at the Excellent level. Four students achieved the Excellent level, while two students achieved the Good level. These results demonstrated that the KWL Plus learning activities were highly effective in improving Thai reading and writing achievement among Vietnamese students.

5.2 Discussion

5.2.1 Vietnamese students demonstrated improved Thai reading and writing skills after participating in the KWL Plus learning activities. Their learning behavior scores and academic achievement scores consistently showed good and excellent levels throughout all rounds of the action research. This was a result of the KWL Plus learning activities, a learning process that promotes active student participation in knowledge construction by systematically linking prior and new knowledge. The research results are consistent with the concept proposed by Carr and Ogle (1987), which describes KWL Plus as enhancing students' deeper understanding through activities involving summarizing, categorizing information, and creating mind maps. These processes develop systematic writing, reading, and critical thinking skills. Furthermore, it aligns with Tisana Khammani's (2019) concept, which states that KWL Plus is a learner-centered teaching method that effectively develops language skills, particularly reading and writing skills, by promoting systematic thinking, analysis, and self-reflection through reading, discussion, and writing activities. It also aligns with the theory of William Grabe and Fredricka Stoller (2011), which indicates that writing ability involves the application of linguistic knowledge and the organization of thoughts to accurately convey meaning. While reading ability develops from the systematic association of symbols, sounds, and linguistic meaning, KWL Plus supports both reading and writing processes through questioning, summarizing, and organizing information. Considering each round of action research, students' average scores increased from 83.81 percent in the first round to 89.53 percent in the second round, demonstrating that improving learning activities through action research enhances teaching effectiveness. This is because researchers used data from behavioral observations and reflected on problems encountered in each round to improve learning activities to suit the learners' context. These findings are consistent with the research by Le Thi Thao Vy and Nguyen Thi Thanh Ha (2020), which studied the impact of the KWL method on reading achievement of 5th grade Vietnamese elementary school students. Their research showed that KWL successfully improved reading comprehension, with the average post-

test score of the experimental group increasing from 16.32 to 21.16, significantly different from the control group at the .05 level. Similarly, research by Siti Rahmah (2023) found that students using KWL Plus had improved reading and writing scores. This includes increased classroom participation. Furthermore.

5.2.2 Vietnamese students achieved excellent academic results after participating in the KWL Plus learning activities, with an average overall score of 89.17 percent. All students passed the 70 percent threshold. This is due to the KWL Plus learning activities providing students with continuous opportunities to practice reading, writing, and summarizing knowledge independently. This resulted in a deep understanding of the Thai language and the ability to apply the knowledge in real-world situations. The research findings are consistent with the concepts of Richard Wagga and Jo Anne Wagga (1999), who stated that KWL Plus teaching helps learners organize information, check their understanding, and develop reading and writing skills through summarization and mind mapping activities. It also aligns with the concept of H. Douglas Brown (2004), who stated that language assessment should be authentic, reflecting the learner's true ability through genuine practice in reading, writing, and participation in learning activities. This study employed reading tests, writing tests, behavioral observation, and assessments of participation in KWL Plus activities, allowing for a comprehensive reflection of learner development. The research findings are also consistent with the work of Maria Elena Cruz (2025), which studied how KWL Plus helps foreign language learners acquire metaliteracy skills. Studies have shown that KWL Plus significantly improves reading comprehension, writing accuracy, summarization skills, and self-directed learning habits. This is because KWL Plus learning activities provide opportunities for students to actively engage in knowledge construction, analytical thinking, summarization, and systematic reflection on their own understanding. This aligns with the research by Nur Aisyah Putri and Ahmad Fauzan (2024), which studied the application of KWL Plus in online language learning environments. Their study found that KWL Plus successfully stimulated student engagement, critical thinking, and writing skills, leading to higher academic achievement.

5.3 Recommendations

5.3.1 Recommendations for Practical Application

Teachers should clearly explain the procedures of KWL Plus activities before beginning instruction, especially for students learning Thai as a foreign language, because learners may not yet be familiar with learning approaches that emphasize questioning, summarizing, and self-reflection.

Teachers should select reading materials and content that are appropriate to the proficiency levels and contexts of Vietnamese students in order to help learners connect prior knowledge with new knowledge more easily and enhance motivation in learning Thai.

Teachers should organize activities that continuously encourage students to practice Thai reading and writing, such as summary writing, mind mapping, group discussions, and reflective activities, in order to promote systematic thinking and sustainable language development.

Teachers should provide close guidance and support during the questioning and summarizing stages because some students may still have limitations in Thai vocabulary and idea organization.

Assessment should incorporate authentic assessment alongside tests, such as behavioral observation, writing evaluation, and participation assessment, in order to comprehensively reflect learners' development.

5.3.2 Recommendations for Future Research

Future studies should investigate the integration of KWL Plus with digital technology or online media to develop Thai reading and writing abilities among foreign language learners in online learning contexts.

Future research should compare the effectiveness of KWL Plus learning activities with other instructional approaches, such as Problem-Based Learning, Cooperative Learning, or Graphic Organizers, in developing Thai language skills.

Future studies should expand the sample group to learners at different educational levels, such as secondary school students, university students, or adult learners studying Thai as a foreign language, in order to examine the suitability of KWL Plus activities in diverse contexts.

Future research should conduct longitudinal studies on the retention of Thai reading and writing abilities after the implementation of KWL Plus learning activities.

Future studies should investigate other factors that may influence the development of Thai reading and writing abilities, such as learning motivation, language anxiety, or self-directed learning skills among foreign language learners.

BIBLIOGRAPHY

BIBLIOGRAPHY

Aisyah Putri, N., & Fauzan, A. (2024). Using KWL Plus strategy to promote reflective learning in online language classrooms. *Journal of Online Language Education, 12*(1), 55–72.

Alhaqbani, A., & Riazi, A. M. (2012). Metacognitive awareness and reading comprehension in second language learning. *Journal of Language Teaching and Research, 3*(4), 684–691.

Alsheikh, A. O., & Mokhtari, K. (2018). Metacognitive reading strategies among ESL learners. *International Journal of Instruction, 11*(3), 123–138.

Anderson, T. (2018). *The theory and practice of online learning* (3rd ed.). Athabasca University Press.

Baker, C., & Jones, S. P. (2019). *Encyclopedia of bilingualism and bilingual education* (2nd ed.). Multilingual Matters.

Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. David McKay.

Boers, F., & Nguyen, M. T. T. (2022). Strategy-based instruction in foreign language reading and writing. *Language Teaching Research, 26*(4), 512–530.

Boonphakdee, K. (2009). *Educational measurement and evaluation*. Chulalongkorn University Press.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school* (Expanded ed.). National Academy Press.

Brown, H. D. (2004). *Language assessment: Principles and classroom practices*. Pearson Education.

Carr, E., & Ogle, D. (1987). K-W-L Plus: A strategy for comprehension and summarization. *Journal of Reading, 30*(7), 626–631.

Chatakarn, V. (2015). *Action research for classroom development*. Mahasarakham University Press.

Chukampang, C. (2008). *Educational measurement and evaluation techniques*. Srinakharinwirot University Press.

Cruz, M. E. (2025). KWL Plus and metacognitive literacy development among foreign language learners. *International Journal of Foreign Language Education, 18*(2), 88–104.

Fisher, D., Frey, N., & Lapp, D. (2011). *Teaching students to read like detectives: Comprehending, analyzing, and discussing text*. Solution Tree Press.

Gagné, R. M. (1974). *Essentials of learning for instruction*. Holt, Rinehart and Winston.

Good, C. V. (1973). *Dictionary of education* (3rd ed.). McGraw-Hill.

Grabe, W., & Stoller, F. L. (2011). *Teaching and researching reading* (2nd ed.). Routledge.

Grabe, W., & Stoller, F. L. (2020). *Teaching and researching reading* (3rd ed.). Routledge.

Hatice, T. (2018). The effects of the KWL strategy on EFL learners' reading comprehension and metacognitive awareness. *Journal of Language and Linguistic Studies, 14*(2), 45–60.

Iamkham, T. (2025). *Educational testing and evaluation in classroom research*. Educational Research Publishing.

Kachen, P. (2013). *Learning achievement and instructional evaluation*. Educational Development Press.

Kamjadpai, S. (2007). *Classroom action research for teachers*. Suan Dusit Rajabhat University Press.

Kemmis, S., & McTaggart, R. (1988). *The action research planner* (3rd ed.). Deakin University Press.

Khammani, T. (2019). *ศาสตร์การสอน: องค์ความรู้เพื่อการจัดกระบวนการเรียนรู้ที่มีประสิทธิภาพ* (*Teaching science: Knowledge for effective learning management*) (23rd ed.). Chulalongkorn University Press.

Kim, A. H., Vaughn, S., Wanzek, J., & Wei, S. (2018). Integrated reading–writing instruction for second language learners. *Reading and Writing Quarterly, 34*(5), 421–438.

Kirkpatrick, A. (2020). *English and language education policy in Asia* (2nd ed.). Routledge.

Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues, 2*(4), 34–46.

McLaughlin, M., & Allen, M. B. (2017). Strategy-based literacy instruction and KWL Plus. *Literacy Research and Instruction, 56*(3), 210–228.

McNiff, J. (2002). *Action research: Principles and practice* (2nd ed.). RoutledgeFalmer.

Ministry of Education. (2008). *Basic education core curriculum B.E. 2551 (2008)*. Ministry of Education.

Moore, M. G., & Kearsley, G. (2020). *Distance education: A systems view of online learning* (4th ed.). Cengage Learning.

Nguyen, M. T. T., & Boers, F. (2022). Strategy-based instruction in foreign language reading and writing. *Language Teaching Research, 26*(4), 512–530.

Nguyen, T. H. (2017). Challenges faced by Vietnamese learners in acquiring Thai reading and writing skills. *Journal of Southeast Asian Language Education, 5*(2), 45–58.

Nguyen Thi Thu Ha. (2016). The use of KWL strategy in teaching reading comprehension to Vietnamese EFL high school students. *Vietnam Journal of Educational Sciences, 12*(3), 44–58.

Nueangchalerm, P. (2013). *Action research for classroom learning development*. Mahasarakham University Press.

Office of the Basic Education Commission. (2008). *Thai language learning standards and indicators*. Ministry of Education.

Ogle, D. M. (1986). K-W-L: A teaching model that develops active reading of expository text. *The Reading Teacher, 39*(6), 564–570.

Panyaphinyopon, K. (2008). *Reflective practice and action research in education*. Educational Innovation Press.

Phongpriboon, Y. (2009). *Participatory action research in educational development*. Chiang Mai University Press.

Phamulila, S. (2018). *Action research and knowledge construction in educational settings*. Educational Research Center Press.

Pham Thi Hong Nhung. (2019). Strategy-based instruction for beginner learners of a foreign language in Vietnam. *Vietnamese Journal of Applied Linguistics, 7*(1), 77–91.

Prasithrathsint, A. (2018). *Thai language and linguistics*. Chulalongkorn University Press.

Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Lawrence Erlbaum Associates.

Rahmah, S. (2023). The effectiveness of KWL Plus strategy in improving reading comprehension and writing skills among EFL students. *Journal of English Language Teaching and Learning, 15*(2), 101–118.

Smyth, D. (2015). *Thai: An essential grammar* (2nd ed.). Routledge.

Srisaard, B. (2003). *Basic research methodology* (7th ed.). Suweeriyasan.

Srisa-ard, B. (2017). *Preliminary research* (10th ed.). Suweeriyasan.

Srisaat, B. (2011). *Preliminary research methods* (9th ed.). Suweeriyasan.

Suepklat, W. (2012). *Action research for educational improvement*. Faculty of Education Publishing.

Suwannachok-isan, W. (2016). *Reading and writing development in foreign language learning*. Educational Development Press.

Tok, H. (2018). The effects of the KWL strategy on EFL learners' reading comprehension and metacognitive awareness. *Journal of Language and Linguistic Studies, 14*(2), 45–60.

Vacca, R. T., & Vacca, J. A. L. (1999). *Content area reading: Literacy and learning across the curriculum* (6th ed.). Longman.

Vo Nguyen Bao Chau. (2021). Learner-centered instructional models in online language learning environments in Vietnam. *Journal of Educational Technology and Language Learning, 9*(2), 66–83.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Whitehead, J. (2006). *Living theory research*. Action Research Press.

Wongsothorn, A. (2019). Problems in Thai language learning among foreign students: A case study of beginner learners. *Thai Language and Culture Journal, 8*(1), 77-92.

Wongwanich, S. (2007). *Classroom action research*. Chulalongkorn University Press.

Yolwan Khanwua. (2024). *Cognitive learning assessment in language instruction*. Educational Evaluation Publishing.

APPENDIX

APPENDIX A

A RESEARCH TOOL

1. Example lesson Plan

Action Tools

The action instruments consisted of 12 lesson plans, consisting of three action cycles, with each cycle corresponding to a specific set of lesson plans and learning contents, developed based on the KWL Plus learning approach, aimed at enhancing the Thai reading and writing abilities of Vietnamese students. The total instructional time was 24 hours. Each action cycle concluded with an achievement test to assess Thai reading and writing abilities, along with reflective data collection to support instructional improvement in the subsequent cycle.

At the end of each Action Cycle, learners completed Achievement Test, which had a total score of 70 points, consisting of:

25 multiple-choice items (4 options each), totaling 25 points, and 5 essay questions worth 45 points. The test assessed both Thai reading and writing skills. The results of the test, together with data from behavioral observations, teaching reflection records, and learner interviews, were analyzed to identify strengths, weaknesses, and instructional issues.

Table A.1 Table of Analysis of KWL Plus–Based Lesson Plans for Enhancing Thai Reading and Writing Abilities of Vietnamese Students

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
Action Cycle 1 consisted of the following lesson plans						
1 (2 hours)	Thai consonant system and three consonant classes	Students can classify the three consonant classes and read/write basic consonants	Thai consonants; middle, high, and low classes	K: The teacher activates learners' prior knowledge by presenting basic Thai consonants and asking learners whether they have previously encountered the Thai writing system. Learners are encouraged to share their initial impressions and prior experiences with Thai consonants W: Learners identify their learning needs by posing questions related to Thai consonants and consonant classes, such as the number of Thai consonants, the rationale for classifying consonants into three classes, and how consonant classes affect pronunciation and reading	PDF file for practicing writing the Thai alphabet, PDF learning materials for Session 1, and audio files on the Thai alphabet	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				L: Learners summarize the knowledge gained from the lesson by identifying Thai consonants and classifying them into mid, high, and low consonant classes. Learners demonstrate their understanding through oral explanations, classification tasks, or completing summary tables Plus: Learners participate in reinforcement and application activities to strengthen reading and writing skills. Activities include practicing reading aloud Thai consonants, practicing writing consonants, completing short quizzes on consonant classification, engaging in quick quizzes, short multiple-choice tests or coloring activities based on the three consonant classes, and reflecting on their learning outcomes		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
2 (2 hours)	Thai vowels and their positions	Students can read and write vowels in different positions	Simple vowels, complex vowels, special vowels and vowel positions	K: The teacher activates learners' prior knowledge by presenting examples of Thai syllables containing vowels and asking learners whether they have previously encountered Thai vowels. Learners are encouraged to recall and share their initial understanding of Thai vowels and their positions in relation to consonants W: Learners are guided to identify and express their learning needs by posing questions related to Thai vowels, such as the number of vowels, their different forms, and their positions (before, after, above, below, or surrounding consonants). The teacher records learners' questions and expectations to guide the learning process	PDF file for practicing writing Thai vowels and PDF learning materials for Session 2	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				L: Learners summarize the knowledge gained from the lesson by identifying different types of Thai vowels and explaining their positions in written syllables. Learners demonstrate their understanding through class discussion, completing summary charts, or matching vowels with their correct positions Plus: Learners engage in reinforcement and application activities to strengthen their reading and writing skills. Activities include practicing writing Thai vowels in correct positions, completing exercises that match vowels with consonants, and participating in short quizzes to consolidate learning outcomes.		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
3 (2 hours)	Blending initial consonants with vowels	Students can accurately read and write open syllables	Reading Initial Consonants with Vowels	K: The teacher activates learners' prior knowledge by presenting examples of Thai syllables formed by combining initial consonants with vowels. Learners are asked to observe the position of vowels and attempt to read the syllables based on their prior experience W: Learners identify their learning needs by posing questions related to reading initial consonants combined with vowels, such as how vowel position affects pronunciation and what rules should be followed when reading different vowel forms L: Learners summarize the knowledge gained from the lesson by explaining the rules for	PDF learning materials for Session 3	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				reading initial consonants combined with vowels and identifying how vowel positions influence pronunciation. Learners demonstrate their understanding through discussion, completing summary tables, or matching exercises Plus: Learners engage in reinforcement and application activities to develop reading and writing skills. Activities include practicing reading aloud syllables formed by initial consonants and vowels, practicing writing syllables correctly, completing reading drills and short quizzes, and applying the reading rules to simple words		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
4 (2 hours)	Final consonants and vowel modifications	Students are able to remember the final consonant groups and the forms of modified vowels	Final Consonants and Unwritten Vowels	K: The teacher activates learners' prior knowledge by presenting examples of Thai words with and without final consonants. Learners observe differences in word structure and vowel forms and share their initial observations based on prior learning experiences. W: Learners identify their learning needs by posing questions related to final consonants and vowel modifications, such as how final consonants are pronounced, why vowel forms change when final consonants are added, and what reading rules should be applied	PDF learning materials for Session 4	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				L: Learners summarize the knowledge gained from the lesson by explaining the characteristics of Thai final consonants, the rules for reading final consonants, and the patterns of vowel modification. Learners demonstrate their understanding through discussion, completing summary charts, or classifying words according to vowel changes. Plus: Learners participate in reinforcement and application activities to enhance their reading and writing skills. These activities include practicing memorization of final consonant groups, practicing writing words with modified vowels, completing exercises that distinguish between words with and		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				without final consonants, and taking short quizzes to reinforce retention of final consonants and various forms of vowel modification		
5 (2 hours)	Reading words with final consonants	Students can accurately read and write words with final consonants	Words with various final consonants	K: The teacher activates learners' prior knowledge by reviewing the concept of final consonants introduced in the previous lesson. Learners are shown sample Thai words containing final consonants and are asked to identify the final consonants and predict their pronunciation based on their existing knowledge W: The teacher guides learners to formulate questions about reading words with final consonants, such as how final consonants are	PDF learning materials for Session 5	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				pronounced, why different consonant letters may share the same final sound, and what reading rules apply when final consonants occur in Thai words L: Learners study and summarize the rules for reading Thai words with final consonants, including the classification of final consonant sounds. Learners explain the reading rules in their own words and provide examples of words with final consonants to demonstrate their understanding Plus: Learners practice reading aloud words and short phrases containing final consonants. Additional activities include pronunciation drills, reading exercises, writing practice, and		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				short quizzes to reinforce reading accuracy and fluency. Learners also reflect on their learning outcomes at the end of the lesson		
Action Cycle 2 consisted of the following lesson plans						
6 (2 hours)	Thai tones	Students can read and write tonal words correctly	Tones and tone rules	K: The teacher activates learners' prior knowledge by encouraging them to recall their experiences with Thai pronunciation. Learners are asked whether they have noticed differences in pitch or tone when listening to Thai words. The teacher plays sample Thai words without tone marks and asks learners to identify perceived high, mid, or low sounds, aiming to raise awareness of tonal variation in Thai	PDF file for practicing writing tone marks and PDF learning materials for Session 6	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				W: Learners are guided to formulate questions related to Thai tones, such as: How many tone marks are there in Thai? How do tone marks affect pronunciation? How can tones be identified when reading Thai words? These questions are recorded to clarify learners' learning needs and objectives for the lesson L: The teacher explains the Thai tonal system, introducing tone marks and their functions. Learners study the rules for reading words with tone marks, including the relationship between consonant classes and tones. Examples are provided, and learners practice identifying tones in written words. At the end of this stage, learners summarize the tonal		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				rules and explain how tone marks influence pronunciation Plus: Learners participate in reinforcement activities to apply their knowledge of Thai tones, including listening and repeating words with different tone marks, reading aloud words and short sentences with tone marks, and writing words with correct tone marks. Additional activities may include tone discrimination exercises, short quizzes, and reflective writing on pronunciation challenges. These activities emphasize active practice and the development of accurate reading and writing skills in Thai		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
7 (2 hours)	Leading consonants	Students can read and write words with leading consonants	Rules for reading leading consonants	K: The teacher activates learners' prior knowledge by reviewing previously learned concepts, including Thai consonants, the three consonant classes (mid, high, and low), and basic tone rules. Learners are asked to read familiar words and recall how the initial consonant class influences tone. This stage helps learners connect existing knowledge to the new topic W: Learners are encouraged to identify and express their questions about words that contain two initial consonants. Guiding questions include: Why are some Thai words written with two consonants but pronounced with only one? How do leading consonants	PDF learning materials for Session 7	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				affect tone? Which consonants can function as leading consonants? These questions are recorded to clarify learners' learning goals for the lesson L: The teacher introduces the concept of leading consonants in Thai, explaining their function and characteristics. Learners study common leading consonants and the rules governing their influence on tone, particularly how leading consonants modify the consonant class of the following consonant. Examples are provided, and learners practice identifying leading consonants and reading words with correct pronunciation. Learners then summarize the rules and explain how leading		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				consonants affect tone Plus: Learners engage in reinforcement activities to consolidate their understanding of leading consonants, such as reading aloud words containing leading consonants,analyzing word structures to identify leading and main consonants, completing short quizzes on tone determination, and writing words with leading consonants. Additional reflective activities may be included to encourage learners to reflect on pronunciation challenges and learning outcomes		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
8 (2 hours)	Consonant clusters	Students can read and write words with consonant clusters	True and false consonant clusters; Reading "ทร"	K: The teacher reviews learners' prior knowledge of Thai consonants, consonant classes, tone rules, and leading consonants. Learners are asked to recall how leading consonants function and to read previously learned words containing leading consonants. This activity helps learners establish a foundation for distinguishing between leading consonants and consonant clusters W: Learners are guided to raise questions about Thai words that contain two initial consonants pronounced together. Sample questions include: What is a consonant cluster? How is a consonant cluster different from a leading consonant? Which consonants	PDF learning materials for Session 8	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				can form consonant clusters in Thai? How should consonant clusters be pronounced? In addition, learners are encouraged to raise questions about Thai words that do not follow regular reading rules. Guiding questions include: Why is "ทร" pronounced as /x/? and why are there cases where "ทร" is pronounced thr? These questions are recorded to clarify learners' learning objectives for the lesson. L: The teacher introduces the concept of consonant clusters in Thai, explaining their characteristics and pronunciation rules. Learners study common consonant clusters and practice identifying them in written words. Examples are provided to demonstrate correct		

(Continued)

Table A.1 (Continued

Lesson Plan (Time)	K concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				pronunciation. Learners then summarize the rules for reading consonant clusters and explain the differences between consonant clusters and leading consonants. Plus: Learners participate in reinforcement activities to apply their knowledge of consonant clusters, including reading aloud words with consonant clusters, comparing words with consonant clusters and words with leading consonants, completing short quizzes, and practicing writing words containing consonant clusters. Reflective activities may be included to encourage learners to evaluate their pronunciation and learning progress		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
9 (2 hours)	Special reading cases	Students are able to read and write accurately words containing double ร, the vowel “ใ”, and other special cases	double ร, vowel “ใ” and Other Special Cases	K: The teacher reviews learners’ prior knowledge of Thai reading rules, including the pronunciation of initial consonants, vowels, final consonants, leading consonants, and consonant clusters. Learners are asked to read familiar words that follow regular reading rules and to recall how pronunciation is usually determined based on previously learned principles. This stage prepares learners to recognize deviations from standard rules W: Learners are encouraged to raise questions about Thai words that do not follow regular reading rules. Guiding questions include: How are words with double ร pronounced? Why is the vowel ใ used only in specific words?	PDF learning materials for Session 9	Observation of students’ learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Which Thai words must be memorized as special cases? These questions help clarify learners' learning needs and objectives for the lesson L: The teacher explains special reading cases in Thai, including the reading patterns of words containing double ร, the use of the vowel ไ in a limited number of words, and other irregular pronunciation cases. Learners study examples of each case and practice identifying and reading these words correctly. Learners then summarize the characteristics of special cases and explain why memorization is necessary for accurate reading		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Plus: Learners participate in reinforcement activities to consolidate their understanding of special reading cases, such as reading aloud words containing double ร, and the vowel ไ; categorizing words into regular and special cases; completing short quizzes or matching exercises; and practicing writing words with correct pronunciation awareness. Reflective activities may be included to help learners reflect on difficulties and strategies for remembering special cases		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
Action Cycle 3 consisted of the following lesson plans						
10 (2 hours)	Thai marks and symbols	Students correctly use Thai marks	Thai marks and symbols	K: The teacher activates learners' prior knowledge by asking them to recall their experiences encountering Thai marks and symbols in written texts. Learners are shown examples of words and sentences containing symbols such as ์, ๅ, and ๎, and are asked whether they have seen these symbols before and how they previously attempted to read or understand them. This stage helps learners connect their prior reading experiences to the new less W: Learners are encouraged to identify and express their questions about Thai marks and symbols. Guiding questions include: What	PDF learning materials for Session 10	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				does each symbol mean? Does this symbol affect pronunciation? When and how should each symbol be used in Thai writing? Learners' questions are recorded to clarify learning objectives and learning needs for the lesson L: The teacher explains common Thai marks and symbols, including the karan mark (์), the reduplication mark (ๆ), the abbreviation mark (ฯ), and other related symbols. The functions of each symbol and their effects on pronunciation, meaning, or sentence structure are explained in detail. Learners study examples of words and sentences containing these symbols and summarize the functions and usage of each mark		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				Plus: Learners participate in reinforcement activities to consolidate their understanding of Thai marks and symbols. Activities include analyzing words and sentences containing symbols, matching each symbol with its function, choosing correct interpretations, reading sentences with appropriate understanding, and practicing writing short words or sentences using the symbols correctly. Reflective activities may also be included to help learners reflect on difficulties and strategies for remembering symbol usage		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
11 (2 hours)	Reading words with ฤ and ฑ	Students are able to read and write accurately words containing ฤ and ฑ	Words containing ฤ and ฑ	K: The teacher activates learners' prior knowledge by presenting several Thai words containing ฤ and ฑ (e.g., ฤดู, ฤทธิ์, บัณฑิต). Learners are asked whether they have encountered these words before and to attempt reading them aloud based on their existing knowledge of Thai consonants, vowels, and basic reading rules. The teacher observes learners' responses and common pronunciation errors to identify gaps in prior knowledge W: The teacher encourages learners to express their learning needs and questions related to the pronunciation of ฤ and ฑ. Guiding questions are provided, such as: "How is ฤ	PDF learning materials for Session 11	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				pronounced in different words?" and "Why is ฑ pronounced differently from other Thai consonants?" Learners formulate questions and expectations about the reading rules for these special cases, which are recorded and used to set lesson objectives L: The teacher explains the pronunciation rules and linguistic characteristics of ฤ and ฑ in Thai. Learners study how ฤ functions as a special vowel sound and how its pronunciation varies depending on word structure, as well as how ฑ is pronounced as /d/ in words of Pali–Sanskrit origin. Examples and comparisons with regular consonant and vowel patterns are		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				provided. Learners summarize the key reading rules and confirm their understanding through guided discussion Plus: Learners participate in reinforcement and application activities, including classifying words containing ฤ and ฑ, practicing reading aloud individually and in groups, completing short exercises to select correct pronunciations, and matching words with their phonetic representations. Additional activities may include reading words in short sentences and writing selected vocabulary to reinforce accurate reading and retention of the learned rules		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
12 (2 hours)	Pali and Sanskrit loanwords	Students can correctly read and write Pali and Sanskrit loanwords	Pali and Sanskrit–derived words	K: The teacher activates learners' prior knowledge by reviewing previously learned Thai reading principles, including consonants, vowels, final consonants, tone rules, leading consonants, consonant clusters, and special reading cases. Learners are shown several commonly used Thai words of Pali and Sanskrit origin and are asked whether they have encountered these words before and how they attempted to read them based on their existing knowledge W: Learners are encouraged to express their learning needs and questions related to Pali and Sanskrit loanwords in Thai. Guiding questions include: How can we identify Thai	PDF learning materials for Session 12	Observation of students' learning behaviors, reading and writing practice tasks, and homework assignments

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				words derived from Pali and Sanskrit? Why do some letters remain silent? Why are these words often long or complex? How should such words be read correctly? Learners' questions are recorded to clarify learning objectives for the lesson L: The teacher explains the characteristics of Thai words derived from Pali and Sanskrit, including common orthographic patterns, the presence of silent letters, consonant clusters, and distinctive pronunciation rules. Learners study representative examples and practice reading these words accurately. At the end of this stage, learners summarize key characteristics and basic reading principles of Pali and Sanskrit		

(Continued)

Table A.1 (Continued)

Lesson Plan (Time)	Key concepts	Learning objectives	Learning content	Learning activities following the KWL Plus process	Instructional media and learning resources	Measurement and evaluation
				words in Thai Plus: Learners engage in reinforcement and application activities to consolidate their understanding. Activities include classifying Thai native words and Pali–Sanskrit words, reading words aloud syllable by syllable, completing exercises based on reading rules, and reading Pali–Sanskrit words in short sentences. Writing exercises are also used to reinforce word forms and support long-term retention. Learners reflect on their learning and difficulties encountered during reading		
24 hours	Total					

Assessment form for writing skills of Vietnamese students

Instructions: Put a slash (/) in the box corresponding to the rating level according to your opinion

Person No.	Accuracy			Completeness			Writing According to Thai Language Rules			Total
	3	2	1	3	2	1	3	2	1	
1										
2										
3										
4										
5										
6										

Scoring Criteria - Evaluation Criteria (Total Score: 9 points)

Score Level 3 (8–9 points) means performance at a very good level
Level 2 (6–7 points) means performance at a good level
Level 1 (3–5 points) means performance at a fair level

Passing Criteria Good level and above (6–9 points)

Individual Worksheet Assessment Criteria (Writing Skills of Vietnamese Students)

Assessment Aspect	Quality Level Descriptions		
	3 (Excellent)	2 (Good)	1 (Satisfactory)
Accuracy	Students answer all questions correctly.	Students answer the questions with 2–3 incorrect answers.	Students answer the questions with more than 3 incorrect answers.
Completeness	Students answer all questions completely.	Students provide incomplete answers for 2–3 questions.	Students provide incomplete answers for more than 3 questions.
Writing According to Thai Language Rules	Students write in accordance with Thai language rules correctly and completely.	Students write according to Thai language rules correctly, but the writing is incomplete or lacks clarity.	Students write according to Thai language rules but require guidance or additional support.

Scoring

Percentage (%)	Interpretation
86-100	Excellent
70-85	Good
0-69	Needs improvement

12-LESSON ONLINE SYSTEM

Click the link below to view all 12 online lessons
https://drive.google.com/drive/folders/1EkMXb7Ka74LsEqUxZKRrnPh4dp7UPhom?usp=sharing

Here are some attached files for students to practice writing the Thai alphabet, vowels, and tone marks
https://drive.google.com/drive/folders/16OxyTWmf3xae70UFrZ1ThfIFmfTi3ZG6?usp=sharing

The attached file contains the pronunciation of the Thai alphabet letters
https://drive.google.com/drive/folders/1lw8rfCT7a82wFOeK0xVGtNOXVyc2aAM_?usp=sharing

Test on Thai Reading and Writing Proficiency of Vietnamese Students (Action Cycle 1)
Click on the link below to view the test
https://docs.google.com/forms/d/e/1FAIpQLSfJHX2y6bmRE_XaRqHJvn3V1KVvmWz-SdiB3FKZ4BS4DgJAfg/viewform?usp=preview

Test on Thai Reading and Writing Proficiency of Vietnamese Students (Action Cycle 2)
Click on the link below to view the test
https://docs.google.com/forms/d/1TVqNa-EAKYAhuhVTCBsB2Wi4h6YcpwcfutX3zuqneLU/preview

Test on Thai Reading and Writing Proficiency of Vietnamese Students (Action Cycle 3)
Click on the link below to view the test
https://docs.google.com/forms/d/1x36e1WWRSkUF6Jb_95GW60KfAGJhRpY03ChvBlJEi9s/preview

2. Evaluation Tools

Thai Reading and Writing Achievement Test

Multiple choice exam (46 points)

1. Con chữ nào dưới đây phát âm là "moo maá"?

Which of the following letters is pronounced "moo maá"?

a. น b. ฉ

c. ม d. ฆ

2. Con chữ nào dưới đây phát âm là "noo nêên"?

Which of the following letters is pronounced "noo nêên"?

a. ณ b. ฌ

c. ญ d. ถ

3. Con chữ nào dưới đây thuộc phụ âm lớp thấp?

Which of the following letters belongs to the low consonant class?

a. จ b. อ

c. ข d. ซ

4. Câu nào không có chữ cái phụ âm thuộc lớp cao?

Which sentence does not contain any high consonant letters?

a. อ ห ฉ ช b. ต บ ป ถ

c. ก ด ธ ฟ d. ฐ ร ฬ ฮ

5. Đâu là nguyên âm "ơ dài" trong tiếng Thái?

Which of the following vowels represents the "long ơ" vowel in Thai?

a. เ-อ b. เ-อะ

c. เ-าะ d. เอือ

6. Nguyên âm sau đây "อัย" là nguyên âm gì?

"อัย" What vowel is this in Thai?

a. uaa b. ay

c. iaa d. ưaa

7. Nguyên âm nào dưới đây là nguyên âm đơn?

Which of the following vowels is a single vowel?

a. เอียะ b. แ-ะ

c. อัว d. เอือะ

8. Nguyên âm nào dưới đây đứng ở phía sau?

Which of the following vowels follows the initial consonant?

a. Nguyên âm ă ngắn b. Nguyên âm êê dài

c. Nguyên âm ee dài d. Nguyên âm ôô dài

9. Từ nào dưới đây không sử dụng nguyên âm đơn?

Which of the following words does not use a single vowel?

a. มือ b. ตี

c. เธอ d. เสือ

10. Đâu là từ vựng mang nghĩa "sen"?

What is the vocabulary word that means "lotus"?

a. อีกา b. ตัว

c. บัว d. ดำ

11. Chọn từ vựng đúng với hình ảnh sau:

Choose the correct vocabulary word to match the following image:



a. อีกา b. บิดา

c. ปะ d. ไป

12. "เขา" Từ này trong tiếng Thái đọc là gì?

"เขา" - How is this word pronounced in Thai?

a. khảu b. khảo

c. khau d. khao

13. Từ nào có phụ âm cuối được phát âm là /p/?

Which word has a final consonant pronounced /p/?

a. ภาพ b. มาก

c. ขาด d. สาม

14. Từ nào có phụ âm cuối được phát âm là /i/?

Which word has a final consonant pronounced as /i/?

a. เลว b. การ

c. คุย d. หิว

15. Từ nào dưới đây sử dụng nguyên âm biến hình?

Which of the following words uses an unwritten vowel?

a. คร b. มีด

c. เมีย d. เมฆ

16. Từ nào dưới đây <u>không</u> sử dụng nguyên âm biến hình?

Which of the following words does not use an unwritten vowel

a. ล็อก b. ขวด

c. เมือง d. คน

17. Từ nào dưới đây phát âm là "khiêẻu"?

Which of the following words is pronounced "khiêẻu"?

a. เขี้ยว b. เขียว

c. เคี้ยว d. เคียว

18. "มังกร" Từ này trong tiếng Thái đọc là gì?

"มังกร" - How is this word pronounced in Thai?

a. Măng côn b. Mang côn

c. Măng coon d. Maang coon

19. Chọn hình ảnh khớp với từ vựng sau "เข็มขัด"

Choose the image that matches the vocabulary word "เข็มขัด"

a. Cà vạt



b. Thắt lưng da



c. Áo phông



d. Mũ lưỡi trai



20. Đâu là cách đọc đúng của từ "เอว"?

What is the correct pronunciation of the word "เอว"?

a. eeo
b. êêu
c. ơơi
d. ooi

21. Từ nào dưới đây phát âm với thanh "thôô"?

Which of the following words is pronounced with the "โท" sound?

a. ผึ้ง
b. ม้า
c. ช้าง
d. ยิ้ม

22. Từ nào dưới đây phát âm với thanh "t'rii"?

Which of the following words is pronounced with the "ตรี" sound?

a. พ่อ b. ซื้อ

c. ชื่อ d. ง่าย

23. Từ nào phát âm có thanh điệu khác với các từ còn lại?

Which word has a different tone than the others?

a. ข่าว b. ถ่าย

c. อ่าน d. โซ่

24. Từ nào phát âm có thanh điệu khác với các từ còn lại?

Which word has a different tone than the others?

a. เลี้ยง b. เคี้ยว

c. แล้ว d. เสื้อ

25. Từ nào dưới đây sử dụng phụ âm dẫn ห?

Which of the following words uses the leading consonant ห?

a. หาย b. เหงา

c. หด d. หูก

26. Từ nào dưới đây <u>không</u> sử dụng phụ âm dẫn?

Which of the following words does not use a leading consonant?

a. ชอุ่ม b. ธนู

c. เหมือน d. กล่อง

27. Từ nào dưới đây sử dụng phụ âm trung dẫn trước?

Which of the following words uses a leading middle consonant?

a. จรวด b. พนัน

c. คณะ d. แถลง

28. Từ nào dưới đây sử dụng phụ âm cao dẫn trước?

Which of the following words uses a leading high consonant?

a. อยาก b. ตลาด

c. ชนิด d. ผนวก

29. Từ nào dưới đây có con chữ phụ âm kép thật?

Which of the following words contains a true consonant cluster?

a. แขวน
b. เศร้า
c. ทราบ
d. บุตร

30. Từ nào dưới đây có con chữ phụ âm kép giả?

Which of the following words contains a false consonant cluster?

a. ญาติ
b. สร่าง
c. เพราะ
d. พลอย

31. Đâu là cách đọc đúng của từ "มัทรี"?

What is the correct pronunciation of the word "มัทรี"?

a. Mát thrii
b. Mắt thrii
c. Mắt rii
d. Mắt xii

32. Đâu là cách đọc đúng của từ "นิทรา"?

What is the correct pronunciation of the word "นิทรา"?

a. Nít thraa
b. Nít raa
c. Nít xaa
d. Nit^ xaa

33. Từ nào dưới đây khác với các từ còn lại?

Which word below is different from the others

a. สรร
b. บรร
c. กรร
d. ธรรม

34. Từ nào dưới đây phát âm với 2 âm tiết?

Which of the following words is pronounced with two syllables?

a. สวรรค์
b. ธรรมดา
c. พรรณนา
d. กรรมกร

35. Đâu là cách đọc đúng của từ "ไหว้"?

What is the correct pronunciation of the word "ไหว้"?

a. wáy
b. way^
c. wái
d. wai^

36. Từ nào dưới đây có phát âm khác nhất so với các từ còn lại?

Which word below has the most different pronunciation from the others?

a. ใต้ b. ไม้

c. ได้ d. น้ำ

37. Đâu là cách đọc đúng của từ "กษัตริย์"?

What is the correct pronunciation of the word "กษัตริย์"?

a. Cặ xặt rí b. Cặ xặt tặ rí

c. Cặ xặt d. Cặ xặt tặ rii

38. Chọn từ viết đúng với nghĩa là "máy tính"

Choose the correct writing of the word "computer"

a. คอมพิวเตอร์ b. คอมพิวเตอส์

c. คอมพิวเตอย์ d. คอมพิวเตอด์

39. Chọn từ khớp với hình ảnh sau đây:

Choose the word that matches the following image:



a. ฟิล์ม b. เบียร์

c. คอนเสิร์ต d. เครดิตการ์ด

40. Đâu là cách đọc đúng của từ "ฤทธิ์"?

What is the correct pronunciation of the word "ฤทธิ์"?

a. ริด b. รึด

c. เริด d. ริก

41. Từ nào dưới đây phát âm là "รึ"?

Which of the following words is pronounced "รึ"?

a. กฤช
b. ทฤษฎี
c. ตฤณ
d. ฤทัย

42. Từ nào dưới đây mà "ฑ" được phát âm là "ด"?

Which of the following words has "ฑ" pronounced as "ด"?

a. มณฑา
b. บัณฑูร
c. บัณฑิต
d. บัณฑร

43. Chọn từ viết đúng dưới đây

Choose the word with the correct writing below

a. ธรณี
b. ธรนี
c. ธะรณี
d. ธะรนี

44. Chọn từ viết đúng dưới đây

Choose the word with the correct writing below

a. บริสุท
b. บริสุทธิ์
c. บอริสุท
d. บะริสุทธิ์

45. Đâu là cách đọc đúng của từ "คุณประโยชน์"?

What is the correct pronunciation of the word "คุณประโยชน์"?

a. คุน-นะ-ประ-โหยด
b. คุน-ประ-โหยด
c. คุน-นะ-ประ-โยด
d. คุน-ประ-โยด

46. Đâu là cách đọc đúng của từ "อิสรภาพ"?

What is the correct pronunciation of the word "อิสรภาพ"?

a. อิด-สะ-ระ-พาบ
b. อิด-ระ-พาบ
c. อิด-สะ-หระ-พาบ
d. อิด-หระ-พาบ

Essay questions (54 points)

1. Cậu bé trong bức hình đang làm gì? Hãy trả lời bằng tiếng Thái

What is the boy in the picture doing? Please answer in Thai



2. Gia đình trong bức hình đang làm gì cùng nhau? Hãy trả lời bằng tiếng Thái

What are the family in the picture doing together? Please answer in Thai



3. Người phụ nữ trong bức hình đang làm gì? Hãy trả lời bằng tiếng Thái

What is the woman in the picture doing? Please answer in Thai



4. Người đàn ông trong bức hình đang làm gì? Hãy trả lời bằng tiếng Thái
What is the man in the picture doing? Please answer in Thai



5. Người phụ nữ trong bức hình đang làm gì? Hãy trả lời bằng tiếng Thái
What is the woman in the picture doing? Please answer in Thai



6. Người đàn ông trong bức hình đang làm gì? Hãy trả lời bằng tiếng Thái
What is the man in the picture doing? Please answer in Thai



Answer key

Question order	Answer	Question order	Answer
1	c	24	d
2	a	25	b
3	d	26	d
4	c	27	a
5	a	28	d
6	b	29	a
7	b	30	b
8	a	31	d
9	d	32	a
10	c	33	d
11	a	34	a
12	a	35	d
13	a	36	d
14	c	37	c
15	a	38	a
16	c	39	d
17	b	40	a
18	c	41	d
19	b	42	c
20	b	43	a
21	a	44	b
22	b	45	a
23	d	46	c

Answers to the essay section

1. เด็กผู้ชายกำลังกินพิซซ่า
2. ครอบครัวนี้กำลังทำอาหารด้วยกัน
3. เธอกำลังทำความสะอาดห้อง/เธอกำลังทำความสะอาดบ้าน
4. เขากำลังร้องเพลง
5. เธอกำลังหวีผม
6. เขากำลังซ่อมรถยนต์

มหาวิทยาลัยราชภัฏมหาสารคาม RAJABHAT MAHA SARAKHAM UNIVERSITY

3. Reflection Tools

Individual Learner Behavior Observation Form

Instruction: The observer rates each learner's behavior during KWL Plus learning activities by marking the appropriate score (5–1)

Person No.	Participation in Learning Activities (KWL Plus)					Collaboration with Others					Problem Analysis					Problem Solving					Positive Attitude toward Thai Learning (Reading & Writing)					Responsibility					Total
	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	5	4	3	2	1	30
1																															
2																															
3																															
4																															
5																															
6																															

Maximum score: 30 points (6 criteria × 5 points)

Scoring Criteria

Scoring Interpretation

Score	Quality Level	Behavioral Description
25–30	Excellent	Demonstrates outstanding performance in all aspects, including active participation in KWL Plus learning activities, effective collaboration, strong analytical thinking, problem-solving ability, positive attitude toward Thai reading and writing, and high responsibility.
19–24	Very Good	Shows good performance with responsibility and positive attitude toward Thai learning, but still needs improvement in some aspects.
13–18	Good	Demonstrates moderate learning behavior; participates and shows effort but lacks consistency in several aspects.
7–12	Fair	Shows limited participation, weak collaboration, and insufficient analytical thinking and responsibility.
1–6	Needs Improvement	Lacks participation in learning activities, shows little interest in Thai reading and writing, and demonstrates low responsibility.

Passing Criteria At least 70% (21 points)

Signature ……

(Miss VU THANH HANG)

Instructor/Evaluator

Detailed Behavioral Assessment Criteria

Assessment Aspect	Quality level description				
	5 (Excellent)	4 (Very Good)	3 (Good)	2 (Fair)	1 (Needs Improvement)
Participation in Learning Activities (KWL Plus)	Actively and consistently participates in all KWL Plus stages (K–W–L–Plus); shows strong engagement and idea sharing	Frequently participates and shows clear interest	Participates moderately but not consistently	Rarely participates unless prompted	Does not participate
Collaboration with Others	Works excellently with others, supports peers, respects and integrates different opinions	Works well with others and exchanges ideas effectively	Cooperates at a basic level	Limited cooperation and interaction	Does not cooperate
Problem Analysis	Clearly analyzes information, identifies key ideas in Thai reading, and explains meaning accurately	Analyzes most information correctly	Can analyze some parts but lacks completeness	Limited ability to analyze Thai texts	Unable to analyze information
Problem Solving	Applies KWL Plus strategies effectively to improve Thai reading and writing; demonstrates creative thinking	Applies strategies appropriatel y with good results	Uses some strategies but not effectively	Limited application of strategies	Does not apply problem-solving strategies

(Continued)

Assessment Aspect	Quality level description				
	5 (Excellent)	4 (Very Good)	3 (Good)	2 (Fair)	1 (Needs Improvement)
Positive Attitude toward Thai Reading and Writing	Shows strong motivation, confidence, and continuous effort in learning Thai	Shows positive attitude and willingness to learn	Shows some interest but inconsistent	Shows little interest in Thai learning	Shows no interest
Responsibility	Completes all assigned tasks accurately and on time; highly responsible	Completes tasks fully and on time	Completes most tasks but with some delays	Completes tasks with assistance	Does not complete tasks

Student interview form

Research Title: *The Development of Learning Activity Using KWL Plus to Promote Thai Reading and Writing Abilities for Vietnamese Students*

Instruction:

Please answer the following questions honestly based on your experience in learning Thai through the KWL Plus learning activities.

---

1. How did you feel about learning Thai reading and writing through the KWL Plus activities?

Reply.....

2. Before using KWL Plus, what difficulties did you face in Thai reading and writing?

Reply.....

3. How did the “K” (What you already know) step help you understand Thai lessons better?

Reply.....

4. How did the “W” (What you want to know) step affect your motivation to learn Thai?

Reply.....

5. How did the “L” (What you learned) step help you improve your Thai reading and writing skills?

Reply.....

6. How did the “Plus” activities (such as summarizing, mapping, or writing) support your learning?

Reply.....

7. Do you think your Thai reading ability has improved after using KWL Plus? How?

Reply.....

8. Do you think your Thai writing ability has improved after using KWL Plus? How?

Reply.....

9. What aspects of the KWL Plus learning activities did you like the most? Why?

Reply.....

10. What suggestions do you have to improve the KWL Plus learning activities for Thai reading and writing?

Reply.....

APPENDIX B

FINDING TOOL QUALITY

1. Determining the quality of the lesson plan

Table B.1 Results of evaluating experts' opinions on the lesson plan.

Evaluation list	Level of expert opinion			$\bar{X}$	*S.D.*	Appropriate level
	1	2	3			
1. The concept convey a clear meaning.	4	5	5	4.67	0.58	very high
2. The concept is consistent with the learning objectives.	4	5	5	4.67	0.58	very high
3. The concept are consistent with the content taught.	4	4	5	4.33	0.58	high
4. The objective is clear and easy to understand.	4	4	5	4.33	0.58	high
5. Objectives are consistent with measurement and evaluation.	4	4	5	4.33	0.58	high
6. Learning content is appropriate for the age of the learners.	4	4	5	4.33	0.58	high
7. Learning content is appropriate for the learning activities used.	4	4	5	4.33	0.58	high
8. Learning activities are appropriate for the time.	4	4	4	4.00	0.00	high
9. Learning activities promote the creation of knowledge by oneself.	4	4	4	4.00	0.00	high
10. Learning activities are diverse and interesting.	4	4	5	4.33	0.58	high

(Continued)

Table B.1 (Continued)

Evaluation list	Level of expert opinion			$\bar{X}$	*S.D.*	Appropriate level
	1	2	3			
11. Learning activities stimulate interest in learning more.	4	4	5	4.33	0.58	high
12. Media and learning resources appropriate for organizing activities.	4	5	4	4.33	0.58	high
13. media and learning resources appropriate to the content and interesting	4	5	5	4.67	0.58	very high
14. Measurement and evaluation are consistent with learning objectives.	4	5	5	4.67	0.58	very high
15. Measurement and evaluation are appropriate to the subject content.	4	5	5	4.67	0.58	very high
16. Measurement and evaluation are appropriate to the learner's context.	4	5	5	4.67	0.58	very high
$\bar{X}$				4.42	0.51	high

2. Determining the quality of the Thai writing ability assessment form

Table B.2 Results of the evaluation of the consistency of the Thai writhing ability assessment form

Evaluation list	Level of expert pinion			$\bar{X}$	*S.D.*	Appropriate level
	1	2	3			
1.10	4	5	5	14.00	4.67	very high
1.20	4	5	5	14.00	4.67	very high
1.30	4	5	5	14.00	4.67	very high
2.10	4	5	5	14.00	4.67	very high
2.20	4	5	5	14.00	4.67	very high
2.30	4	5	5	14.00	4.67	very high
3.10	4	5	5	14.00	4.67	very high
3.20	4	5	5	14.00	4.67	very high
3.30	4	5	5	14.00	4.67	very high

3. Determining the quality of learning achievement test

Table B.3 Results of the evaluation of the consistency of the learning achievement test

Point number	Level of expert opinion			Total	IOC	Consistency
	1	2	3			
1	1	1	1	3.00	1.00	available
2	1	1	1	3.00	1.00	available
3	1	1	1	3.00	1.00	available
4	1	1	1	3.00	1.00	available
5	1	1	1	3.00	1.00	available
6	1	1	1	3.00	1.00	available
7	1	1	1	3.00	1.00	available
8	1	1	1	3.00	1.00	available
9	1	1	1	3.00	1.00	available
10	1	1	1	3.00	1.00	available
11	1	1	1	3.00	1.00	available
12	1	1	1	3.00	1.00	available
13	1	1	1	3.00	1.00	available
14	1	1	1	3.00	1.00	available
15	1	1	1	3.00	1.00	available
16	1	1	1	3.00	1.00	available
17	1	1	1	3.00	1.00	available
18	1	1	1	3.00	1.00	available
19	1	1	1	3.00	1.00	available
20	1	1	1	3.00	1.00	available

(Continued)

Table B.3 (Continued)

Point number	Level of expert opinion			Total	IOC	Consistency
	1	2	3			
21	1	1	1	3.00	1.00	available
22	1	1	1	3.00	1.00	available
23	1	1	1	3.00	1.00	available
24	1	1	1	3.00	1.00	available
25	1	1	1	3.00	1.00	available
26	1	1	1	3.00	1.00	available
27	1	1	1	3.00	1.00	available
28	1	1	1	3.00	1.00	available
29	1	1	1	3.00	1.00	available
30	1	1	1	3.00	1.00	available
31	1	1	1	3.00	1.00	available
32	1	1	1	3.00	1.00	available
33	1	1	1	3.00	1.00	available
34	1	1	1	3.00	1.00	available
35	1	1	1	3.00	1.00	available
36	1	1	1	3.00	1.00	available
37	1	1	1	3.00	1.00	available
37	1	1	1	3.00	1.00	available
39	1	1	1	3.00	1.00	available
40	1	1	1	3.00	1.00	available
41	1	1	1	3.00	1.00	available
42	1	1	1	3.00	1.00	available

(Continued)

Table B.3 (Continued)

Point number	Level of expert opinion			Total	IOC	Consistency
	1	2	3			
43	1	1	1	3.00	1.00	available
44	1	1	1	3.00	1.00	available
45	1	1	1	3.00	1.00	available
46	1	1	1	3.00	1.00	available
47	1	1	1	3.00	1.00	available
48	1	1	1	3.00	1.00	available
49	1	1	1	3.00	1.00	available
50	1	1	1	3.00	1.00	available
51	1	1	1	3.00	1.00	available
52	1	1	1	3.00	1.00	available

APPENDIX C

OFFICIAL LETTER REQUESTING PERMISSION FROM EXPERTS

บันทึกข้อความ

ส่วนราชการ สาขาวิชาหลักสูตรและการเรียนการสอน คณะครุศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม

ที่ อว ๐๖๑๙.๐๒/ว๐๔๓ **วันที่** ๒๗ มกราคม ๒๕๖๙

เรื่อง เชิญเป็นผู้เชี่ยวชาญตรวจสอบเครื่องมือและเก็บรวบรวมข้อมูลการวิจัย

เรียน อาจารย์สุวิทย์ คำมณี

ด้วย Miss Vu Thanh Hang รหัสประจำตัว ๖๗๘๑๑๐๑๘๐๒๐๒ นักศึกษาปริญญาโท สาขาวิชาหลักสูตรและการเรียนการสอน รูปแบบการศึกษานอกเวลาราชการ ศูนย์มหาวิทยาลัยราชภัฏมหาสารคาม กำลังทำวิทยานิพนธ์ เกี่ยวกับ "THE DEVELOPMENT OF LEARNING ACTIVITY USING KWL PLUS TO PROMOTE THAI READING AND WRITING ABILITIES FOR VIETNAMESE STUDENTS" เพื่อให้การวิจัยดำเนินไปด้วยความเรียบร้อย บรรลุตามวัตถุประสงค์

คณะครุศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม จึงขอเรียนเชิญท่านเป็นผู้เชี่ยวชาญตรวจสอบความถูกต้องของการวิจัย

เพื่อ ☑ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา

☐ ตรวจสอบด้านการวัดและประเมินผล

☐ ตรวจสอบด้านสถิติ การวิจัย

☐ อื่น ๆ ระบุ.....

จึงเรียนมาเพื่อโปรดพิจารณา

(นายอนุสรณ์ ถูสินแก่น)

คณบดีคณะครุศาสตร์

บันทึกข้อความ

ส่วนราชการ สาขาวิชาหลักสูตรและการเรียนการสอน คณะครุศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม

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เรียน อาจารย์วณิชา สาคร

ด้วย Miss Vu Thanh Hang รหัสประจำตัว ๖๗๘๑๐๑๘๐๒๐๒ นักศึกษาปริญญาโท สาขาวิชาหลักสูตรและการเรียนการสอน รูปแบบการศึกษานอกเวลาราชการ ศูนย์มหาวิทยาลัยราชภัฏมหาสารคาม กำลังทำวิทยานิพนธ์ เกี่ยวกับ "THE DEVELOPMENT OF LEARNING ACTIVITY USING KWL PLUS TO PROMOTE THAI READING AND WRITING ABILITIES FOR VIETNAMESE STUDENTS" เพื่อให้การวิจัยดำเนินไปด้วยความเรียบร้อย บรรลุตามวัตถุประสงค์

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เพื่อ ☐ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา

☐ ตรวจสอบด้านการวัดและประเมินผล

☑ ตรวจสอบด้านสถิติ การวิจัย

☐ อื่น ๆ ระบุ.....

จึงเรียนมาเพื่อโปรดพิจารณา

(นายอนุสรณ์ ถูสินแก่น)

คณบดีคณะครุศาสตร์



บันทึกข้อความ

ส่วนราชการ สาขาวิชาหลักสูตรและการเรียนการสอน คณะครุศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม

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เรียน ผู้ช่วยศาสตราจารย์อนุสรณ์ จันทร์ประทักษ์

ด้วย Miss Vu Thanh Hang รหัสประจำตัว ๖๗๘๑๑๐๑๘๐๒๐๒ นักศึกษาปริญญาโท สาขาวิชาหลักสูตรและการเรียนการสอน รูปแบบการศึกษานอกเวลาราชการ ศูนย์มหาวิทยาลัยราชภัฏมหาสารคาม กำลังทำวิทยานิพนธ์ เกี่ยวกับ "THE DEVELOPMENT OF LEARNING ACTIVITY USING KWL PLUS TO PROMOTE THAI READING AND WRITING ABILITIES FOR VIETNAMESE STUDENTS" เพื่อให้การวิจัยดำเนินไปด้วยความเรียบร้อย บรรลุตามวัตถุประสงค์

คณะครุศาสตร์ มหาวิทยาลัยราชภัฏมหาสารคาม จึงขอเรียนเชิญท่านเป็นผู้เชี่ยวชาญตรวจสอบความถูกต้องของการวิจัย

เพื่อ ☐ ตรวจสอบความถูกต้องด้านเนื้อหา ภาษา

☑ ตรวจสอบด้านการวัดและประเมินผล

☐ ตรวจสอบด้านสถิติ การวิจัย

☐ อื่น ๆ ระบุ.....

จึงเรียนมาเพื่อโปรดพิจารณา

(นายอนุสรณ์ ถูสินแก่น)
คณบดีคณะครุศาสตร์

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