

# **An Enhancement of second year vocational certificate students' Reading Comprehension Ability Through KWL, Nakhonsawan Technical college**

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## **Abstracts**

The purposes of this research were 1) to compare the students' ability of English reading comprehension skill before and after learning through KWL technique 2) to study the students' satisfied toward learning management to improve their reading comprehension skill with KWL teaching technique. The sample populations were the 34 of the second-year vocational certificate students selected by purposive sampling who enrolled Reading Authentic Materials in English Course for Semester 2 (2/2022). The instruments used in this study were 4 lesson plans, pre-test and post-test, and the questionnaire for collecting the students' satisfied in the enhancement of English reading comprehension ability through KWL technique. The data were analyzed by Mean, Standard Deviation, and t-test. The results of the research were as follows:

1. The students' ability of English reading comprehension skill after learning with KWL teaching technique was significantly higher than before at the level of 0.5
2. The students' satisfied toward the learning management to improve their reading comprehension skill with KWL – Plus were at a high level ( $\bar{x}$  = 4.65)

**Keywords:** English Reading Comprehension Skill; KWL Teaching Technique; Nakhonsawan Technical college

## **Introduction**

Nowadays, Thailand's various educational institutions, both formal and informal, have begun to recognize the importance of using English for communication. As a result, various educational institutions begin to develop curricula to encourage students to study and learn more foreign languages. For example, the curriculum of the Office of the Vocational Education Commission has been revised every 5 years so that students can learn content that is current with world changes. Because the number of hours for studying a foreign language at the vocational certificate level remains the same, students may not notice the changes in the course very clearly. When comparing the number of hours spent learning a foreign language at the diploma level, the changes in curriculum adjustments will be seen. As a result, the researcher would like to compare the teaching hours of two foreign language subjects used in Nakhonsawan Technical College for teaching and learning, the curriculum in 2014, English for Communication subject is required to study for 3 hours per week and English - on - the - Job subject is required to study for 2 hours per week. After 5 years, the Office of the Vocational Education Commission in the Ministry of Education adjusts the curriculum to keep up with the changes of the times and became a curriculum in 2020, which is considered the current curriculum that is still used within the educational institutions of the Office of the Vocational Education Commission in the Ministry of Education. According to a comparison

of the number of teaching hours, students in English for Communication study from 3 to 4 hours per week, while students in English - on - the - Job study from 2 to 3 hours per week. The comparison of the adjustment of hours in the teaching curriculum is revealed that the learners have to learn English for more hours, indicating that the Office of the Vocational Education Commission in the Ministry of Education recognizes the importance of studying English by focusing on students to study and learn more in foreign language to increase the learners' language potential to be higher than before. This is in accordance with the Office of the Vocational Education Commission's policy issues for the year 2022 in item 2.4 on curriculum development and learning management processes based on the National Qualifications Framework, the accumulation of learning credits (Credit Bank), and the extension of knowledge and new competencies or new careers (New Job/Future Job). Every 5 years, the Office of the Vocational Education Commission will revise the teaching and learning curriculum so that students can learn content that is current with global changes. Item 2.5 is about developing professional skills for vocational learners through practical experience and training. When students intern at a factory or company, they must meet with foreign owners of companies or entrepreneurs, as well as manuals and principles for using various mechanic equipment, which most of them show in foreign languages, so the use of English has a significant impact on this issue. In addition, item 2.6 focuses on developing the potential of teachers and vocational education personnel to use and create modern learning innovations in the digital and future worlds. If students and staff lack of the knowledge of foreign languages, they may be unable to learn and keep up with various media because English is currently classified as a common language that people all over the world use to communicate with one another. If there is a crash or stuck in this section, the students and the personnel will face additional communication and learning challenges.

From the problem state, looking at the results of the Vocational National Educational Test (V-NET) of the third-year vocational certificate students in 2021, it is found that the statistical values for educational institutions are separated by components. The average English proficiency achievement of Nakhonsawan Technical College is 27.83, while the national average for English subjects is 29.58, indicating that the mean score is lower than the standard score. Due to the Vocational National Educational Test (V-NET) for English subjects, the students must have strong reading and comprehension skill in English. According to Pongtawee Tassawa (2022), this problem is caused by students being born and raised in a Thai-speaking environment. As a result, the English language is regarded as unimportant and distant. Despite the fact that we live in a borderless world, students are neglecting and not paying attention as they should. English is widely regarded as the main language for communicating, gaining knowledge, and influencing careers and daily life in every part of the world (Saeheaw, T., Chakpitak, N., and Adipattaranan, N., 2009). Another significant issue in the English teaching management of vocational certificate students is that students are still unable to read in order to comprehend the content because teachers frequently read while the students simply listen. Students are rarely given the chance to practice reading. They lack reading comprehension skill because they lack clear reading steps and are unable to pronounce the words.

Nowadays, reception skills include not only looking and listening, but also reading, which is a fundamental and important skill in communication. According to Phanhippa Parawat (2021), reading is a fundamental skill that enables readers to perceive information and apply that knowledge for the benefit of self-development and the surrounding society.

Furthermore, in today's borderless world, various news is important to change the surrounding events or to affect people in a broader range. As a result, reading is regarded as a fundamental skill that enables readers to keep up with the changing world. Therefore, keeping up with the news is more effective than not keeping up with the news because people who have access to news are better able to prepare for changing events than those who do not have access to news at all. According to Jindarat Chutson (2016), those who read a lot have a better chance of knowing more knowledge than those who read less. Furthermore, Nittaya Puetpian, Sunitta Yentour, and Phawarisa Choradon (2021) emphasize the importance of reading, stating that people who read a lot have a higher chance of success in life than those who read less because those who read a lot have a lot of knowledge and can apply that knowledge to develop things quickly, resulting in success faster than others.

As a result, in order for students to have a positive attitude toward teaching and learning English, teachers should make the teaching environment fun, enjoyable, and stress-free, and focus on student participation. Using the KWL technique developed by Carr and Ogle, learners are encouraged to become more involved in their reading comprehension learning through a systematic and stepwise thinking process that links new knowledge to previous knowledge. Learners must check themselves to see how much they know about what they read (K - What do I know? ), then plan and set goals for what they want to learn from the story read (W - What do I want to learn? ), through taking notes, creating charts, and summarizing the knowledge in their own form (L - What did I learn? ), which will result in learners understanding in the content that can be received deeply.

According to the study's rationale, the researcher is interested in enhancing English reading ability for higher student comprehension by applying the KWL technique to enhance English reading ability for students' comprehension.

## **Research Objectives**

1. To compare the learning achievements of second-year vocational certificate students before and after learning using the learning management method through the KWL technique.
2. To investigate students' attitudes toward learning using the learning management method through the KWL technique of second-year vocational certificate students.

## **Research Methodology**

### **1. Population and Sample**

The sample group for this study was 34 second year vocational certificate students at Nakhonsawan Technical College, Electronic Department, Room 1 and 2, academic year 2022, studying Reading Authentic Materials in English 20000 -1203 by random sampling. The students that the researcher taught were chosen as an experimental group.

### **2. Research Instruments**

There were 4 research instruments as follows:

1. Four lesson plans (3 hours each) for enhancing English reading comprehension through the KWL technique. Analyzed and chose the content. Set objectives for each learning unit to scope the content. The researcher chose content from the book Reading Authentic Materials in English for second-year vocational certificate students to improve their English reading comprehension ability.

The following were the four learning units:

Lesson plans 1: Reading Styles & Strategies

Lesson plans 2: Non-Fiction

Lesson plans 3: Fiction & Reading for Enjoyment

Lesson plans 4: Newspaper

The learning management model through the KWL technique consisted of 3 steps, which were as follows:

Step 1: K (What do I know?) is a brainstorming session with learners to assess their prior knowledge and understanding of themselves.

Step 2: W (What do I want to learn) is the learner's expectation of gaining knowledge from the story they were about to read.

Step 3: L (What I have learned) is a recording of what has been learned after reading to determine whether or not you have gained knowledge of what you are aiming before reading or when reading and learning something new that is not expected previously.

2. The 4 multiple-choice questions with twenty items of English reading comprehension proficiency test through the KWL technique, covering content and core competency courses in Reading Authentic Materials in English.

3. The satisfaction questionnaire's 16 items were divided into 4 categories: content, teaching and learning activities, learning facility, and teachers.

### 3. Research Design

The research design used in this research was One group, Pretest – Posttest Design

Pretest	Learning	Posttest
T <sub>1</sub>	X	T <sub>2</sub>

If T<sub>1</sub> means Testing before learning with KWL technique

X means Learning with KWL technique

T<sub>2</sub> means Testing after learning with KWL technique

### 4. Data Collection

The researcher conducted the research and collected the data as follows:

1. Clarified to Electronics department students, the sample, about the goals of the research on English reading comprehension using the KWL technique, and clarified the learning process so that students could behave appropriately, which would be useful in conducting research

2. The researcher administered an English reading comprehension test to 34 second year vocational certificate students, the experimental group, at Nakhonsawan Technical College, Office of the Northern Vocational Education Commission Region 4, Mueang Nakhonsawan District, Nakhonsawan Province, and recorded the results as a pre-test score.

3. Taught English reading comprehension ability through the KWL technique

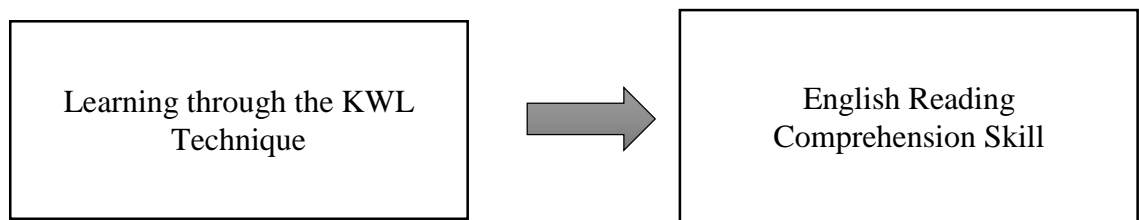
4. Assessed English reading comprehension ability through the KWL technique with a sample group of students. The test was the same as the pre-test, and the results were recorded as post-test.

5. The sample group was given a satisfaction questionnaire to determine the level of satisfaction of students after teaching and learning through the KWL technique.

### Research Conceptual Framework

The independent variable was learning through the KWL technique to enhance English reading comprehension skill for the second-year vocational certificate students.

The dependent variable was English reading comprehension skill learning through the KWL technique for the second-year vocational certificate students.



### Research Results

1. The learning achievements learned by the learning management method through the KWL technique of second year vocational certificate students after learning were higher than before learning at the statistical significance level of 05.

A summary of research findings on enhancement of English reading comprehension ability through KWL technique in Reading Authentic Materials in English of second year vocational certificate students could summarize the research results as follows:

#### Part 1: A comparison of second-year vocational certificate students' learning achievements before and after learning through the KWL technique

According to the research objective No. 1, it was to compare the learning achievements of second-year vocational certificate students before and after learning through the KWL technique learning method. The following tables showed the results as:

**Table 1: English reading comprehension proficiency scores of 34 students before and after learning management through the KWL technique, as well as the difference between the two scores before and after learning**

No.	Full Score 20		Differences (D)		No.	Full Score 20		Differences (D)
	Before Learning	After Learning				Before Learning	After Learning	
1	6	10	4		18	1	10	9
2	8	18	10		19	9	16	7
3	3	15	12		20	6	8	2

4	10	18	8	21	12	15	3
5	8	19	11	22	7	19	12
6	10	14	4	23	5	10	5
7	7	18	11	24	5	11	6
8	8	18	10	25	6	10	4
9	9	19	10	26	7	17	10
10	6	15	9	27	5	12	7
11	5	17	12	28	4	10	6
12	3	12	9	29	6	12	6
13	5	15	10	30	7	12	5
14	3	10	7	31	1	10	9
15	7	15	8	32	3	10	7
16	6	11	5	33	2	10	8
17	3	14	11	34	6	13	7

According to Table 1, the results of the comparison of the learning achievements learned by the learning management method through the KWL technique of second-year

vocational certificate students before and after learning from 20 items pre- and post-test, full score of 20 points, the highest difference score was 12 points and the lowest difference score was 2 points.

**Table 2: The mean and standard deviation of students' pre-test and post-test scores**

According to Table 2, the correlation between pre-test and post-test scores of 34 test takers was .602, or 60.2%.

#### Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Learning Pair 1 Learning	-7.765	2.753	.472	-8.725	-6.804	-16.446	33	.000

**Table 3: The correlation of second-year vocational certificate students' pre-test and post-test scores before and after learning**

According to Table 3, the mean scores of students' pre-test with a full score of 20, the mean score

(  $\bar{X}$  ) was 5.85, and the standard deviation (S.D) was 2.59, while the mean score (  $\bar{X}$  ) of students' post-test was 13.62, and the standard deviation (S.D) was 3.37.

**Table 4: Statistical value t-test dependent comparison of second-year vocational certificate students' learning achievements learned by the learning management method through the KWL technique before and after learning**

According to Table 4, for the comparative results of the learning achievement learned by the learning management method through the KWL technique of second-year vocational certificate students before and after learning, the t-statistical value was -16.446, the sig.(2 tailed) value was.000, which was less than the statistical significance level of 0.05. These statistics revealed that the comparative results of the learning achievements learned by the learning management method through the KWL technique of second-year vocational certificate students before and after learning were significantly higher than before, with statistics at the.05 level, which is consistent with the research objective No. 1.

**Paired Samples Statistics**

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Before	5.85	34	2.595	.445
	Learning				
	After Learning	13.62	34	3.376	.579

2. The students were satisfied toward the learning management method through the KWL technique at the highest level with a mean (  $\bar{X}$  = 4.65).

**Part 2: The findings of a study of second-year vocational certificate students' satisfaction toward learning using a learning management method through the KWL technique**

The results of a study of students' satisfaction toward learning management through the KWL technique are shown in the table below as:

**Table 5: The findings of a study of second-year vocational certificate students' satisfaction toward learning by learning management method through the KWL technique**

No.	Lists for Assessment	$\bar{X}$	S.D.	Level of Satisfaction	Order
<b>1. Content</b>					
1.1	The course content is appropriate and meets the needs of the students.	4.71	0.52	The highest	2
1.2	The course content is appropriate for the students' basic knowledge.	4.65	0.54	The highest	3
1.3	The content is organized from simple to difficult.	4.79	0.40	The highest	1
1.4	Content organization is appropriate for study time.	4.53	0.74	The highest	4
1.5	Content organization is appropriate for studying age.	4.26	0.95	High	5
<b>Total Score of Content</b>		<b>4.59</b>	<b>0.63</b>	The highest	<b>(4)</b>
<b>2. Teaching and Learning Activities</b>					
2.1	Students take part in both teaching and learning activities.	4.74	0.50	The highest	2
2.2	Students practice their critical thinking skills.	4.32	0.63	High	4
2.3	Students work through a series of activities to improve their reading comprehension skills.	4.76	0.49	The highest	1
2.4	Students improve their reading comprehension through the KWL technique.	4.62	0.59	The highest	3
<b>Total Score of Teaching and Learning Activities</b>		<b>4.61</b>	<b>0.55</b>	The highest	<b>(3)</b>
<b>3. Learning Enhancement</b>					
3.1	Encourage students to practice critical thinking	4.74	0.56	The highest	2
3.2	Promote the development of reading comprehension skills through the KWL technique	4.68	0.58	The highest	3
3.3	Encourage students to think in a systematic manner	4.82	0.45	The highest	1
3.4	Encourage students to realize morality and ethics	4.44	0.50	High	4
<b>Total Score of Learning Enhancement</b>		<b>4.67</b>	<b>0.52</b>	The highest	<b>(2)</b>
<b>4. Teachers</b>					



4.1	The teacher clarifies the teaching and learning activities for the students to understand clearly.	4.91	0.28	The highest	1
4.2	Teachers are facilitators, counseling, and caring for students in class thoroughly.	4.79	0.40	The highest	2
4.3	Teachers encourage students to be enthusiastic about their work.	4.47	0.55	High	3
<b>Total Score of Teachers</b>		<b>4.73</b>	<b>0.41</b>	The highest	<b>(1)</b>
<b>Total Score for the Overall</b>		<b>4.65</b>	<b>0.53</b>	The highest	

According to Table 5, overall, students' opinions on learning management through the KWL technique were at the highest level in all aspects, with a mean ( $\bar{X}$ ) of 4.65 and a standard deviation (S.D) of 0.53. When considering each factor separately, it was discovered that students' opinions agreed in terms of teachers at the highest level with a mean ( $\bar{X}$ ) of 4.73 and a standard deviation (S.D) of 0.41, followed by students who agreed a lot in terms of learning enhancement with a mean ( $\bar{X}$ ) of 4.67 and a standard deviation (S.D) of 0.62, students who agreed a lot in terms of teaching and learning activities with a mean ( $\bar{X}$ ) of 4.61, standard deviation (S.D) of 0.55, and the students who agreed a lot in terms of content with a mean ( $\bar{X}$ ) of 4.59 and the standard deviation (S.D) of 0.63, respectively.

It was also discovered that students were satisfied with the learning management through the KWL technique in each aspect was as follows:

1. In terms of content, the students' overall satisfaction with the content was at the highest level, ranked in order as: item 1.3 the content is organized from simple to difficult ( $\bar{X} = 4.79$ , S.D. = 0.40), followed by item 1.1 the course content is appropriate and meets the needs of the students ( $\bar{X} = 4.71$ , S.D. = 0.52), item 1.2 the course content is appropriate for the students' basic knowledge ( $\bar{X} = 4.65$ , S.D. = 0.54), item 1.4 content organization is appropriate for study time ( $\bar{X} = 4.53$ , S.D. = 0.74), and item 1.5 Content organization is appropriate for studying age. ( $\bar{X} = 4.26$ , S.D. = 0.95), respectively.

2. In terms of teaching and learning activities, the students' overall satisfaction with the teaching and learning activities was at the highest level, ranked in order as: item 2.3 students work through a series of activities to improve their reading comprehension skills ( $\bar{X} = 4.76$ , S.D. = 0.49), followed by item 2.1 students take part in both teaching and learning activities ( $\bar{X} = 4.74$ , S.D. = 0.50), item 2.4 students improve their reading comprehension through the KWL technique ( $\bar{X} = 4.62$ , S.D. = 0.59), and item 2.2 students practice their critical thinking skills ( $\bar{X} = 4.32$ , S.D. = 0.63), respectively.

3. In terms of learning enhancement, the students' overall satisfaction with the learning enhancement was at the highest level, ranked in order as: item 3.3 encourage students to think in a systematic manner ( $\bar{X} = 4.82$ , S.D. = 0.45), followed by item 3.1 encourage students to practice critical thinking ( $\bar{X} = 4.74$ , S.D. = 0.56), item 3.2 promote the development of reading comprehension skills through the KWL technique ( $\bar{X} = 4.68$ , S.D. = 0.58), and item 3.4 encourage students to realize morality and ethics ( $\bar{X} = 4.44$ , S.D. = 0.50), respectively.

4. In terms of teachers, the students' overall satisfaction with the teachers was at the highest level, ranked in order as: item 4.1 the teacher clarifies the teaching and learning activities for the students to understand clearly ( $\bar{X} = 4.91$ , S.D. = 0.28), followed by item 4.2 teachers are facilitators, counseling, and caring for students in class thoroughly ( $\bar{X} = 4.79$ ,

S.D. = 0.40), and item 4.3 teachers encourage students to be enthusiastic about their work ( $\bar{X}$  = 4.47, S.D. = 0.055), respectively.

## Discussion

The research findings from the study on the enhancement of English reading comprehension ability through KWL technique in Reading Authentic Materials in English of second year vocational certificate students could be discussed as follows:

1. The learning achievements of second year vocational certificate students using the learning management method through the KWL technique after learning were higher than before learning at the statistical significance level of .05 as expected assumptions.

This could be due to the researcher's decision to use the KWL technique to enhance English reading ability in Reading Authentic Materials in English, which was used to teach second-year vocational certificate students at Nakhonsawan Technical College. The researcher taught learners about knowledge creation and the KWL technique, which could be used with reading various publications. Students who understood the principles of reading and could comprehend the content would be able to read articles or other media with comprehension. According to Spearman (1992, p. 1075), reading comprehension was the creation of meaning in what was read by the reader, and Patsaraporn Teeravongsanurak (2019, p. 36) stated that reading comprehension was the ability to understand and interpreted meaning from what you read, either directly or implying the letter between the lines based on the thought process and interaction between the reader and the reading story from their previous experience. When learners engaged in a thought process, they drew on prior knowledge and added new knowledge from what they had read that cause resulting in reading comprehension. According to Suttirat Kongthai (1996, p. 9), students with high reading comprehension ability could read various texts with accurate and fast comprehension, allowing them to be reasonable and have the ability to use discretion, evaluate, and draw conclusions. In addition to considering the meaning and importance of reading, the researcher would consider teaching and learning activities in order to organize reading comprehension activities. There should be planning for organizing experiences and readers' knowledge so that readers could understand what they read. Furthermore, the activities should include goals for what teachers want their students to gain from what they read, as well as a systematic sequence of activities so that readers can practice the analytical thinking process in the future in a systematic and hierarchical manner. In the same way, the researcher's design of teaching and learning management plans based on the book's contents 20000-1203 Aimphan Publishers' Reading Authentic Materials in English with modern content that was enjoyable to read, as well as being a newly published book with colors and topics, and the contents were appropriate for the reader's age. There was a set of steps in teaching reading activities that conformed to the English Language Institute (2014, p. 4), which had proposed 3 activities for teaching reading:

1. Pre-reading activities are designed to arouse the readers' interest, give some backgrounds for knowledge, and provide some context for the story to be read. In general, there are 2 steps:

Step 1: Personalization is a stage in which teachers and students or students with students interact to review previous knowledge and prepare to receive new knowledge from reading.

Step 2: Predicting is a stage in which students make predictions about what they will read. It may use learning media such as pictures, charts, practice vocabulary activities, or reading questions about what they are about to read to provide students with guidelines on what will be read.

2. While-reading activities involve understanding the text of the reading story and practicing reading comprehension skill. The activities should be planned to practice reading comprehension skill as follows:

**Questioning** is the process of asking questions about what has been read.

**Predicting** is predicting what will happen.

**Clarifying** is the process of determining the clarity of words or phrases in a reading story.

**Summarizing** is concluding each reading paragraph to get the main idea.

**Ordering** is reading and sorting pictures or sentences in the order of the story.

**Deciding** is reading a sentence and deciding whether it is fact or opinion.

**Supplying / Identifying** is reading and identifying a topic sentence or summarizing the main idea (Conclusion) or finding the main idea or setting the title or specific information from the story

3. Post-reading activity is an activity that encourages students to practice the use of language with relational skills gained from reading, listening, speaking, and writing. The activity should train students to write their opinions, summaries of what they learned from reading, or problem-solving experiences.

As a result, once the researcher was aware of the reading activity, the researcher incorporated the KWL technique into the enhancement of reading comprehension for students. The KWL learning management system was a learning process that focuses on the learners' reading skill, which conformed to the skill of thinking consciously about what you think? and what are your thoughts? The students could check their own thoughts and modified their own thinking strategies. They would be trained to be aware of the process of self-awareness, planning, goal setting, checking their understanding, and efficiently organizing the information system for later retrieval. According to Kiattichai Yanarangsee (1997, p. 47), teaching and learning management using the KWL Plus technique was a reading comprehension strategy that encouraged learners to bring their previous experiences to interpret the text they read and encouraged learners to participate in asking questions that gave students a purpose for reading Information to exchange with friends in the group. The KWL technique used by the researcher includes steps that adhere to the concept of Suwit Munkham and Orathai Munkham (2002, p. 88), who discussed the teaching process through the KWL technique as follows:

1. K or What to Know is a step in preparing basic knowledge by reviewing previous knowledge related to the content that teachers want to teach by allowing students to brainstorm, take notes, or create a chart on paper.

2. W or What you want to know is a step in establishing learning objectives in which teachers may ask questions to encourage students.

3. L or What you have learned is the process of keeping track of what students have learned.

The teachers encouraged as Supanee Sotho (2011, p. 80) proposed the learning process through the KWL technique as follows:

1. Before reading, the teacher encourages students' prior experiences with the content to be read by discussing existing knowledge about the topic and writing a topic summary. Following that, anticipate and guess what information the students will find about the content and then ask them what they want to know.

2. During reading, students pause at intervals of reading to answer the questions written before reading and may ask additional questions. Students write down what they have learned from the reading.

3. After reading, discuss what students learned from reading and consider whether the answer is exactly what students want or not. Then, summarize the learned information to the main idea in the form of a mind map.

All of the aforementioned had an effect on the learning achievement learned by the learning management method through the KWL technique of second-year vocational certificate students after learning higher than before learning at the statistical significance level of .05, which adhered to the objectives. Furthermore, the aforementioned findings were consistent with a domestic study conducted by Pongtawee Tassawa (2022, p. 164) on The Study of Students' Reading Achievement after Learning by using KWL-Plus Strategy by experimenting with second-year English major students at Lampang Rajabhat University, which discovered that the post-test results were higher than before. On the other hand, foreign research conducted by Zalisman Z. and Astafi R. (2021, P. 15) on Improving Students' Reading Comprehension Through "KWL Plus" Technique involved a three-step study: first, students filled out a three-column KWL grid; second, students created a mind map based on KWL; and finally, students wrote a mind map summary. It was discovered that using the KWL Plus technique in students' reading comprehension resulted in a positive outcome and improved academic achievement. The study of satisfaction toward learning through the KWL technique found the highest level of satisfaction with an average of 4.65 as the objectives. When each aspect was ranked in order of satisfaction from highest to lowest average score, it was discovered that the first was for teachers. This could be due to teachers acting as facilitators, counseling students, and thoroughly caring for them in class. They explained teaching and learning activities for students to understand clearly and gave guidelines for practicing reading comprehension to students until they could read the contents they were interested in understandably. According to Uthai Piromruen (2011, p. 54) had given guidelines for practicing reading comprehension as follows:

1. Understand how to set reading goals that what you want to learn
2. Consider the sentence structure and the meaning of words to better understand the story.
3. Take note of the before-and-after message, words with similar meanings (Synonym), and Summary (Summary)
4. Teach students to predict what they will read in order to better understand the story
5. Compile the text from what you read and integrate it for complete comprehension.
6. Practice students to notice related details in reading by assigning them to read and critique what they read

The second was to encourage learning. It encouraged students to develop critical thinking skill and promoted the enhancement of reading comprehension ability through the KWL technique, which encouraged students to think systematically, according to Kanata Thatthong (2008, p. 235), who stated that the learning management using the KWL Plus technique was a learning management that focuses on the reading process by the process of

self-understanding, planning, setting goals, checking understanding, and organizing information system that allowed readers to read various stories with comprehension, interest, and enjoyment.

The third was teaching and learning activities. The researcher emphasized that students engaged in teaching and learning activities that were thought to be the most beneficial to them. It was to create knowledge systematically on their own, as stated by the nature of students who chose to study for vocational or technical courses, such as at Nakhonsawan Technical College. The majority of the students were men studying in the industrial field. The curriculum emphasized practice over theory, but when teaching English, it was critical to create a flexible environment for teaching and learning for students. It would have an impact on good English learning achievement, and in the course of Reading Authentic Materials in English that the researcher had taught, the KWL technique was chosen to be paired with interesting English reading content, increasing learners' satisfaction toward both the teacher and their reading achievement. According to Thapanee Nakornthap (2004, p. 17), student learning success was dependent on their ability to read comprehension. Students who did not understand and could not comprehend the main ideas were bored with their studies, had negative reading attitudes, including reading habits, and their academic achievement was lower than it should be. According to the findings of Patsaraporn Teeravongsanurak (2019, p. 87), who studied Using KWL-Plus Technique to Develop of Creative Thinking Skills and English Reading Comprehension Ability of Grade 10 Students at Maesaiprasitsart School, Maesai District, Chiang Rai Province, it was discovered that students performed better on the post-test than on the pre-test in every learning unit. Students had improved their writing skill in order to express themselves more effectively. There was progress in writing more detailed content, a compilation of ideas, and new and different ideas from the original. Furthermore, students' satisfaction toward the KWL Plus learning technique was at the highest level. This could be due to the researcher's successful organization of teaching and learning activities for the learners, which resulted in the greatest satisfaction in this aspect as well.

The fourth was content. The course content was appropriate and conformed to the needs of the students, and the content arrangement was appropriate for the study time. The average was in the most satisfactory level in this aspect, but it was in the last order of various aspects, which could be due to content and study time. The researcher normally teaches two hours per week, but because the teaching plan is three hours per week, the discontinuity in each content may cause the students to lose interest and forget the previous lesson. As for the content of the course, it is appropriate for the students' fundamental knowledge. There are readings in this book that are quite well known and familiar to the basics of students, such as the gods that students have already read or seen in movies or cartoons. Because of the connection with previous experiences, when learners find these contents in the chapter in the reading, they will inevitably understand and comprehend what has been read better and faster. Furthermore, they learned new KWL techniques for reading comprehension in accordance with the Thai Language Institute (2014, p. 5) gave the purpose of reading as the pursuit of knowledge, reading for entertainment, searching for news, or reading for the development and modification of personality, with which the researcher agreed because the selection of entertaining and enjoyable content would have a positive effect on the learners' attention as well as affecting good satisfaction with the content learned.

## Suggestions

### Teaching and Learning Management Suggestions

1. To enhance English reading comprehension ability using the KWL technique, teaching time should be 3 hours per week in accordance with the learning management plan for continuity of learning activities.

2. In the process of teaching what students have learned (What I Have Learned) to ensure that all students can learn according to the purpose of understanding the reading content, teachers should encourage and assess students' knowledge on a regular basis. KWL should be tested on a regular basis as well to stimulate understanding, not just as a post-test check.

### Future Research Suggestions

1. English reading activities in Extensive Reading and other readings should be organized so that students can practice reading strategies and increase their knowledge all the time.

2. A research study on reading lesson plans using the KWL strategy in conjunction with other skills, for example, to study the effect of English teaching plans using the KWL strategy on writing skill, should be conducted because students must read comprehension and then write on the KWL worksheet, both vocational and academic courses include an English writing course.

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