The use of semantic field approach to enhance English vocabulary development of Prathomsuksa 4 students at Betty Dumen Border Patrol Police School, Phayao Province, Thailand

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Abstract

This research aimed to analyze numbers of English vocabulary proficiency in Prathomsuksa 4 students after using the semantic field instruction, to present semantic field teaching instruction contributing to the development of the students' English vocabulary retention proficiency, and to analyze the students' satisfaction towards the teaching instruction. The participants of the research were 12 Prathomsuksa 4 students, at Betty Dumen Border Patrol Police School. The instruments of this study included lesson plans using semantic fields to develop students' vocabulary proficiency, pre-test and post-test, and a questionnaire. The study found that the English vocabulary proficiency of the participants had a statistically significant increase ($p = 0.01$) after the use of the English vocabulary instruction process through the semantic field and the relations between words in the semantic field could contribute to the students' vocabulary retention with the statistical better performance in recalling the meaning of the vocabulary. Furthermore, the students' attitude towards learning and teaching English were labeled as "Extremely Satisfied".

Keywords: Semantic field application, English vocabulary teaching and learning

1. Introduction

English as an international language has been widely promoted in every level of education for decades including in Thailand. However, the Department of Education reported that in 2018, there were 13.24% (23,015 of 173,837 students) of the primary school students in Bangkok who could not read or write in English. As well as Bangkok's primary students, the students nationwide have encountered the same problem. It is undeniable that one of many factors claimed by the public as a cause of this problem is a traditional teaching method which focuses on passive learning or teacher-centered that views teacher as a controller whereas students are listeners which is ineffective [1]. For 21- century students who need communication, collaboration, critical thinking, and creativity skills, using the only traditional method in a classroom does not "allow students to express themselves, ask questions, and direct their learning", then make them bored and may miss important issues [2]. As a result, many worldwide types of research on teaching English as a foreign language have been developing to ameliorate the problem such as Khatib (2011) [3], Khalid and Azeem (2012) [4], Gang (2014) [5], Esbrí (2014) [6], etc.

Linguistics as the scientific study of language also takes part in this responsibility in the way that Syarif (2016) [7] said "Linguistics as the scientific study of language has a very crucial role in running language instruction. Changes in language teaching-learning methods reflect the development of linguistic theories." For linguists, they view language in terms of a system of symbols for communication and to transfer information, vocabulary plays a significant role corresponding to Wilkins (1972: 111-112) who stated "Without grammar, very little can convey. Without vocabulary, nothing can be conveyed" [8]. In language teaching and learning, the more vocabulary the students know, the more proficiency they could attain. Besides, the indispensableness of vocabulary in language teaching and learning is also emphasized by Kanoksilapatham and Khamkhian (2012) that to succeed in studying English, vocabulary skill development is necessary [9]. Common European Languages Framework of Reference in Languages (CEFR) which is an international standard for describing language ability also uses vocabulary size for communication to measure levels of English proficiency from breakthrough to mastery. Therefore, learning vocabulary is a necessary key to achieve language proficiency.

A semantic field is a linguistic approach proposed for explaining interrelations between words or vocabulary in a particular category such as synonym-

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antonym, and superordinate-subordinate. It has been applied to English vocabulary teaching and learning several times by many researchers in different levels of subjects. For example, Guo (2010) conducted research with Chinese college students [10]. Phuriudomseth (2010) studied in Thai secondary school students [11]. All of them found that applying the semantic field to vocabulary teaching and learning is more effective than the traditional way. Later, Gao and Xu (2013) [12], Wangru (2016) [13], and Boran, (2018) [14] proposed the application of the semantic field to EFL vocabulary teaching.

Betty Dumen Border Patrol Police School is one of the border patrol police schools. It is located in Phayao Province, northern Thailand. It is a boarding school with 110 students and 12 teachers in 2018. With approximately 1 teacher per 9 students, it seems sufficient for an effective classroom, yet most teachers are border patrol polices – they are not professional teachers. The problem towards Thai and English learning and efficiency are arisen and cause the students' illiteracy in Thai and English because most of the students (about 80%) are ethnic groups who study Thai and English as their 2nd and 3rd languages. Many problems are obstructing the students' English learning development such as insufficiency of instructional media and teachers, the difficulty for both teachers and students to reach resources of knowledge because of its remote location. Then, the students' English proficiency is affected as the O-NET (Ordinary National Educational Test) score in English of Prathomsuksa 6 students in 2015 was 24.79% while the national scores were 40.31%. Under these conditions, one way to resolve the illiteracy of the students is starting with finding an appropriate vocabulary instruction method which is simple but effective in terms of vocabulary learning processes. Since the semantic field is a model presenting how the human brain organizes information naturally, and several related research studies have proved that it is effective for EFL vocabulary learning. However, Phuriudomseth (2010) suggested that it would be effective for intermediate or high proficient students and most research conducted the experiments with the secondary and college students. This research is therefore influenced by these semantic field studies and vocabulary teaching and learning [15, 16] to develop English vocabulary instruction process through the use of semantic field and analyze numbers of English vocabulary proficiency in Prathomsuksa 4 students at Betty Dumen Border Patrol Police School after using the semantic field.

2. Objectives of the Study

The objectives of this study included the following:
1. To present semantic field teaching instruction that could develop the students' proficiency.
2. To analyze numbers of English vocabulary proficiency in Prathomsuksa 4 students after using the instruction.
3. To analyze the students' satisfaction towards the teaching instruction.

3. Literature Review

Two fields are integrated into this research: vocabulary learning and semantic field approach.

3.1 Vocabulary teaching and learning

Several scholars suggested ways to enhance the students to master English skills as a foreign language by starting with learning vocabulary words such as Brown and Payne (1994), Nation (2001), and others.

Brown and Payne (1994) propose 5 steps in learning vocabulary in a foreign language: (1) encountering new words, (2) getting a clear image, either visual or auditory or both of the forms of the new words (3) learning the meaning of the words (4) making a strong memory connection between the forms and the meanings of the words, and (5) use the words.

While Brown and Payne (1994) presented effective teaching and learning vocabulary procedures, Nation (2001), Frost (2019) [17], and Kanoksilapatham and Khamkhian (2012) provide 3 essential things of word knowledge needed to be learned: (1) form including the words' pronunciation and their spelling, (2) meaning including the words' concepts and semantic relations or mind mapping, (3) use of words including grammatical functions, collocations, and contexts of word used.

These suggestions on vocabulary teaching and learning could be grouped into 5 aspects that the instructors should be aware of. They include word form, pronunciation, meaning and the connections or relations to other words, and its use in a real-world situation.

3.2 Semantic field and vocabulary teaching-learning

"The vocabulary of a language is not simply a listing of independent items, but is organized into areas (of fields) within which words inter-relate and define each other in various ways." [18].

From this statement, the semantic field could be viewed in broad and narrow definitions. With the broad definition, Crystal (2011) defined "An area of human experience or perception, like color, that is delimited and subcategorized by a set of interrelated vocabulary items in a language." [19]. Besides, the semantic field could be prospective in a more specific meaning as Lehrer (1985) defined it as "A set of lexemes which cover a certain conceptual domain and which bear certain specifiable relations to one another." [20]. Moreover, Nordquist (2017) stated that the field is usually expressed by the theme of words that share some common properties such as body parts, colors, and food [21].

In teaching and learning vocabulary Tanner and Green (1989: 29) said that vocabulary should be taught in lexical sets mentioned in their statement that "We don't store words in our brains in alphabetical order like a dictionary does [22]. Research into memory has shown that we store words in our brain in groups of related words (or lexical sets). Words that are related are joined together in our brains; if a new word can be hooked to words which are already stored, it might be easier to remember it. It would seem logical therefore that we should teach words in lexical sets to our learners, so that it is easier for them to retain and store the words in their memory"

Examples of semantic or lexical relations connecting those vocabularies consist of synonymy, antonymy, hypernymy, hyponymy, holonymy and meronymy. These relations link vocabulary in various ways:

By synonymy or the similar meaning such as pretty-cute, test-exam

By antonymy or the opposite meaning such as good-bad, up-down, light-dark

By hypernymy-hyponymy or the generic-specific meaning such as tree-oak, institute-school, country-Thailand

By holonymy-meronymy or the whole-part image as shown in bus-wheels, table-legs, hand-fingers

Boran (2018) emphasized the systematic interrelation of vocabulary and suggested that "EFL/ESL teachers should always remember that, human brain stores words in relation to other. If words are taught in relation to each other as semantic fields of sense relations, EFL/ESL teachers facilitate students' learning of English vocabulary."

3.3 Applications of Semantic field to vocabulary teaching and learning

There are several research studies applying the semantic field to vocabulary teaching and learning.

Guo (2010) compared the development in learning English vocabulary of the 104 second-year non-English majors from Jiangxi University of Science and Technology students instructed by two teaching methods: Grammar Translation for the control group and application of semantic field for the experiment group. According to Zimmerman (2003), it focuses on translating new vocabulary with native-language equivalents and a test [24]. With this traditional teaching method, Chen (2010) transcribed it into the following methods [25].

1. The teacher reads aloud the new words, and students repeat after the teacher.

2. The teacher explains some keywords chosen from the material, usually by offering meanings and sentence examples.

3. The teacher interprets vocabulary exercises.

4. The teacher gives dictations to check whether students have mastered the new words.

At the same time, the experiment group was instructed with a semantic field that follows Brown and Payne's steps of teaching vocabulary:

1. Pre-reading brainstorming of the words in the same field. For example, learners are asked to do the brainstorming concerning romance.

2. Getting the pronunciation, spelling and meaning of the new words. The students read the passage and guess the meaning of new words from the context in which they are used.

3. Constructing semantic fields based on various semantic relations. The teacher should find appropriate words to set up semantic fields of the new items, and at the same time make the presentation procedure an interesting learning process for the students.

4. Consolidation during passage analysis. The students were asked to analyze the paradigmatic and syntagmatic relations between words in the reading passage with the semantic fields constructed previously.

5. Revision of word knowledge. Exercises with stimulus words to the students newly learnt words were provided.

The study took two hours a week and lasted 15 weeks in total. The results of this study revealed that there was a significant difference in the post-test between the experimental and control groups.

As mentioned earlier, Phuriudomseth (2010) studied English Vocabulary Achievement and Retention of 49 Mathayomsuksa 3 Students (Grade 12) of Patumwan Demonstration School Srinakharinwirot University Learning through the Use of Semantic Field Approach. The study took 1 hour and 40 minutes a week and lasted 8 weeks. The findings presented that by applying a sematic field to English vocabulary learning the students could achieve a significantly higher score from their pre-test ($p = 0.01$) and they still remembered the vocabulary they have studied for 2 weeks at least. The research applied the semantic field to her teaching plans and followed them step by step as summarized below.

1. Determine the scope of teaching by considering the appropriate vocabulary for the study and categorize them by semantic relations such as synonymy and antonymy.

2. Analyze the semantic features of each group of words.

3. Establish lesson plans.

4. Introduce each lesson by giving the students some keywords, then asking them to write the shared meaning of those words in worksheet 1, and then the instructor gives the correct answer and asks the students to pronounce each word after her.

5. Discuss the meaning of each word presented in worksheet 2 with the students and asks them to analyze the semantic features of each word.

6. Discuss collocations of the words and gives the students some examples.

7. Ask the students to work in a group discussing

synonymy and antonymy, then fill the correct word in worksheet 3, and present them the correct answer.

8. Ask the students to create their sentences using the new word learnt previously.

Wangru (2016) applied the semantic relations to the semantic network linking new words and known words of the English vocabulary of 120 Chinese students from the school of Mathematics at Henan Polytechnic University. The instruction method was transcribed into the following steps:

1. Determine the scope of teaching based on objectives of each lesson, for example, learn about understand friendship.

2. Learn some useful words and sentences such as trust, respect, affection, and life without a friend is death.

3. Describe people's appearances, clothes, characters, and hobbies.

4. Introduce the lesson by a free talk with the students and follow up questions, for example, "Who is the impressive person in your mind?" and "What impressed you most?"

5. Present the students the prepared words to describe persons and their semantic network through the teaching media.

6. Practice using those words in context by letting the students ask their friends about people's characters such as "Who is he in the picture?", "Why do you choose him as your friend?", "What is his figure?", "And how about his stature?"

7. Give the students some homework by asking them to make up a new dialogue and write a short passage related to the topic.

The results of the research showed that the students were satisfied with the learning and they believed that they had better learning achievement in basic knowledge, reading, writing, and vocabulary acquisition.

However, all these research studies were conducted with the students in secondary school and higher education who can read and write, and have sufficient background knowledge in English vocabulary to study semantic relations such as synonymy, or antonymy. In contrast, the target group of this study is Prathomsuksa 4 or grade 7 students who are illiterate. Therefore, it is the teacher's job to analyze semantic relations of the words and create networks to show the semantic field, then create a story based on the networks as an example for the students.

4. Research Methodology

To achieve the research objectives, the researcher divided the research methodology into 2 processes: developing the semantic field application processes, and research experiment.
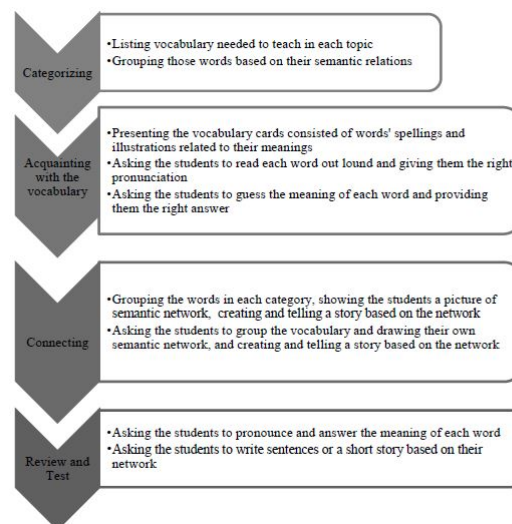

Figure 1: The vocabulary instruction processes by using the semantic field ((Hantrakul, A. et al., 2019: 19) [26].

4.1 Synthesizing and developing the semantic field application processes from the related researches

At this stage of the research, the researcher reviewed the related researches on the application of the semantic field approach to vocabulary teaching and learning. Then synthesized those instruction processes into 5 steps as followed.

These steps include (1) Preparing the vocabulary by categorizing them first based on their semantic relations to create semantic fields (2) Warming up by guiding the students about the topic of the lesson (3) Listing the vocabulary about the topic (4) Demonstrating the meaning of each word, semantic network of the words listed, and stating semantic relations (5) Practicing the use of each vocabulary in the real context or situation. These steps seemed to be effective to enhance the ability in memorizing the vocabulary if the students can read and already know the meanings of the words they have learned. However, these 5 steps are still not completed in terms of vocabulary teaching processes because they skipped the step of acknowledging the vocabulary pronunciation and their images based on Brown and Payne (1994).

Then, the researcher has developed the semantic field instruction processes by considering Brown and Payne (1994), Nation (2001), and Kanolsilapatham and Khamkhien (2012) who propose the teaching English vocabulary methods. It was shown in Fig. 1.

The vocabulary learning processes through the semantic field proposed here include a total 4 steps: categorizing, acquainting with the vocabulary, connecting, and test as explained below step by step.

4.1.1 Categorizing

Before teaching, a teacher has to list all needed vocabulary in each topic and then categorize them into
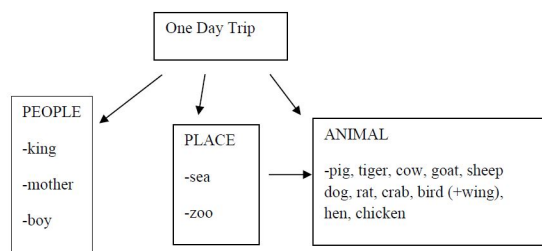
Figure 2: A Semantic Network on the topic "One Day Trip".

groups by considering their semantic relations within the group such as hypernymy and hyponymy, and holonymy and meronymy. Then designed the lesson plan by teaching each group at a time. For example, an animal group is consisted of the word "cow", "dog", "tiger", "pig", and "sheep". A place group is composed of "sea" and "zoo". The relation connected with these groups is hypernymy and hyponymy.

4.1.2   Acquainting with the vocabulary

At this step, the teacher showed each vocabulary card of a group. In each card, there must be an illustration of each word's meaning with its spelling. Then the teacher pronounced each word clearly and asked the students to repeat it loudly or let the students try to pronounce it themselves. Later, let them guess the meaning of each word by its picture, and the teacher gave them the correct answer. Next, the teacher repeated this step until the students had learned every word in the group.

4.1.3   Connecting

List all vocabulary in the group, and gave the students an example of a semantic connection. Then show the students a picture of a semantic network as illustrated in Fig. 2, create and tell a story based on the network as the example. Next, ask the students to group the vocabulary and drawing their semantic network, and creating and telling a story based on the network.

The illustration presents the semantic network on the topic "One Day Trip" which presented the vocabulary about people, place, and animal. After presenting the picture, the teacher will let the students work in groups and created their own networks and stories.

4.1.4   Review and test

After practicing to a group and connect each group of words, the teacher will review the students' vocabulary knowledge by asking them to tell the meaning of each word by looking at its spelling. If they could not give the right answer, then the teacher pronounced that word and asked them again. If they still could not give the right answer, then the teacher showed them the picture of that word and asked them again. If they

could not give the right answer, then the teacher gave them hints from the stories or network they created and asked them again. Finally, test the students by showing a list of words and asking them to tell the meaning of each word.

After developing these instruction processes, the researcher conducted one group experiment research to test the teaching model mentioning in the next topic.

4.2   Research experiment

This part of the research was divided into 4 parts: participants, instruments, data collection, and data analysis.

4.2.1   Participants

The participants were 12 Prathomsuksa 4 students at Betty Dumen Border Patrol Police School. They are comprised of 4 females 8 males who were taught by the traditional teaching method due to the insufficiency of the professional teachers. The reason why the Prathomsuksa 4 students became the subjects or participants of the research is that the students at this level of education are expected to achieve at least 3 aspects of learning standards declared by the Ministry of Education of Thailand (2008) include pronunciation, reading competence at the sentence level, and providing some personal information, yet the students here could not read and write in English. To fulfil these expectations, the students have to know the numbers of vocabulary first. Besides, Prathomsuksa 4 students were purposively selected because Prathomsuksa 5-6 students are unavailable since the school has to prepare them for the ONET.

4.2.2   Research instruments

The instruments used in this research included: 1. Lesson plan using semantic fields to develop students' vocabulary proficiency 2. Pre-test and post-test 3. Questionnaire.

4.2.1.1 Lesson Plan using semantic fields to develop students' vocabulary proficiency

Using the semantic field for categorizing data is a guideline for the teacher to help the students categorize the meanings of the vocabulary they have learned and provide them some linking concept that might help them to remember the meanings easier. The vocabulary was purposively selected based on English alphabet sound system matched sight words from English Glossary for Primary School (Office of the Basic Education Commission, 2016) because this research is a part of the Development of English Abilities of Prathomsuksa 4 Students through an Integration of Phonics, Semantic Fields, and Syntax for an Invention of Personal Narratives on Local Experience project. The process of the project was started with the English sound system to develop the students' pronunciation, then moved onto this semantic process by applying the semantic field to enhance the vocabulary memorizing

Table 1. Outline of Lesson Plan.

Period/40 minutes	Category	Vocabulary	Materials & Activities
1	People	People: mother, boy	-Flashcards
		Organs: ear, nose, legs	-Semantic Mapping
	Verbs	breathe, watch	-storytelling
2	Animals	pig, tiger, cow, goat, sheep, dog, rat, carb	
	Animals with wings	bird, duck, chicken, hen	
3	Number, Thing	Number: five	
		Thing: mop, dish, ball	
	Review	Semantic mapping	

of the students. Finally, the syntax was used to create sentences.

With these steps of the integration, the semantic process plays an important role as a cognitive connection of sounds, words, and sentences. That's the reason why the researcher decided to use these vocabularies.

The example presented people, animals, things, and events that could be found in a village and school. The semantic relations illustrated in the figure included holonymy and meronymy, and hypernymy and hyponymy. After grouping data into fields, the brief outline of the lesson plans could be written as shown in Table 1.

This lesson plan was used for 1 week or 3 times. Each time took 40 minutes after classes. Since the participants were Prathomsuksa 4 students and many of them couldn't read or spell English words, a total of 44 vocabularies learnt in 40 minutes would be overloaded. Therefore, about 3-5 groups of words or not more than 15 words in a time seemed to be more appropriate.

4.2.1.2 Pre-test and Post-test

Written pre-test and post-test were all 44- vocabulary listed in random order. Only criterion used for scoring is the correct meaning (written in Thai) of each word. The tests were examined in terms of the IOC (Item-Objective Congruence Index) valued of 0.94 by 3 experts in linguistics before using it with the participants.

4.2.1.3 Questionnaire

The questionnaire was used to survey the teacher and students' satisfaction towards the semantic field instruction process. There were 3 questions asked in Thai which could be translated as 1. Learning English vocabulary via this method (the semantic field) is appropriate for the students' level 2. Learning English vocabulary via this method helps the students to acquire the vocabulary's meanings easier 3. I like Learning English vocabulary with this method.

4.2.3 Data collection

The researcher collected the pre-test score a month before starting the research because based on the project, the students had to pass the pronunciation process first. The post-test was conducted after finishing the instruction processes for a week since it is an appropriate period for testing the retention (Hawhan, 1979).

4.2.4 Data analysis

Analysis of the data has been done by using mean, standard derivation, and t-test for mean scores.

5. Results

The results of the tests were analyzed and revealed in 2 parts: the vocabulary proficiency test and Students' and Teacher's attitude towards semantic field application shown in Table 2, 3, and 4 respectively.

5.1 Pre-test and post-test scores

From the test, the result showed that the increase in the students' scores was statistically significant as presented in Table 2.

Table 2. Results of the vocabulary tests.

44 Voc.	n	x̄	S.D.	t	p
Pre-test	12	34.58	4.42	-6.45*	0.000
Post-test	12	41.25	3.74		

*0.05 ($p < .05$)

Table 3. Teacher's Attitude towards Semantic Field Application.

Questions	Teacher (1)		
	x̄	S.D.	Label
1. Learning English vocabulary via this method is appropriate for the students' level.	4	0	Satisfied
2. Learning English vocabulary via this method helps the students to acquire the vocabulary's meanings easier.	5	0	Extremely Satisfied
3. I like Learning English vocabulary with this method.	5	0	Extremely Satisfied

The data presented in Table 2 illustrated that the students could recall more vocabulary with a mean score of 41.25 after learning the vocabulary. Besides, the t-score was -6.45 and the p value presented a statistically significant increase at 0.01.

These results implied that applying the vocabulary learning processes through the semantic field could enhance the students' proficiency in learning English vocabulary.
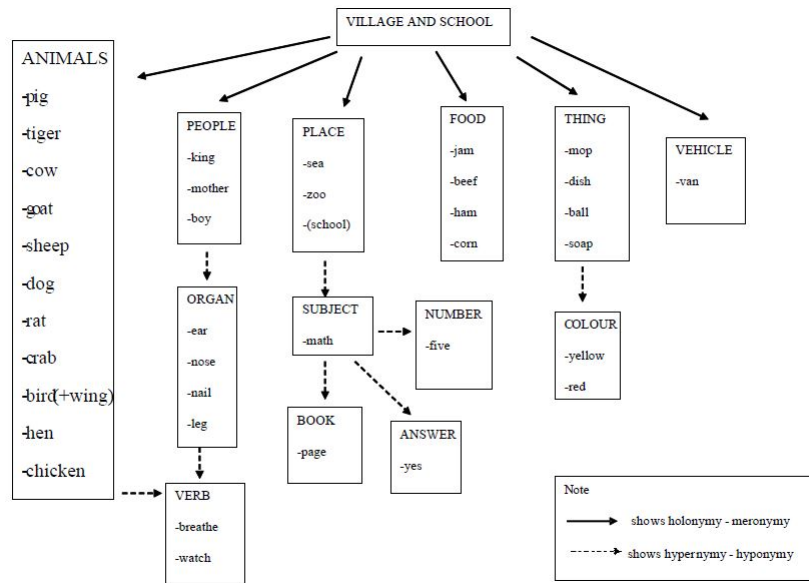
Figure 3: A Semantic Network on the topic "My Village and Scholl".

Table 4. Teacher's Attitude towards Semantic Field Application.

Questions	Students (12)		
	x̄	S.D.	Label
1. Learning English vocabulary via this method is appropriate for the students' level.	4.67	0.49	Extremely Satisfied
2. Learning English vocabulary via this method helps the students to acquire the vocabulary's meanings easier.	4.58	0.51	Extremely Satisfied
3. I like Learning English vocabulary with this method.	4.67	0.49	Extremely Satisfied

5.2 Students' and Teacher's Attitude towards Semantic Field Application

In the questionnaire with 1-5 rating scale surveying the attitude of the students and teacher towards the integrated model, 3 questions about the semantic field application revealed that they liked the semantic field application to English vocabulary study and teaching.

The answers from the questionnaires illustrated the positive attitude of both teacher and students participating in the research. With the appropriateness of the fields to the level of the students' learning ability, the teacher labelled 4 "Satisfied" while the students said 4.67 "Extremely Satisfied". Asking whether the fields help the students in acquiring the meaning easier, both the teacher and the students placed "Extremely Satisfied" with x̄ = 5 and 4.58. The last question was about their satisfaction with the semantic field application in learning English vocabulary, and the result showed that they were "Extremely Satisfied" with x̄ = 5 and 4.67 respectively.

6. Discussion

Because knowing vocabulary is the most important factor to achieve linguistic competence for language learners, it is essential for teaching and learning vocabulary to establish a connection between sound, word, meaning, and its use. The semantic field approach integrated into the teaching methods presented in this research could encourage the students to create these connections and achieve their language competence as explained below.

The results of this study show consistent with Guo (2010), Phuriudomseth (2010), Thuy (2010) [25] Gao and Xu (2013), and Wangru (2016) applied semantic fields to their English teaching and found that the students' English proficiency was improved and the students enjoyed this kind of teaching rather than the traditional method by writing that they liked learning vocabularies on their comments in the questionnaires.

Even these studies share a similar theoretical framework, there are differences in population and teaching methodology. While Guo (2010), Phuriudomseth (2010), Thuy (2010), and Gao and Xu (2013) conducted the research with secondary school, high school and college students and encouraged their students to elaborate vocabulary connected to the fields by considering the semantic relations they have taught, this study focused on the primary students and one who was responsible to gain knowledge about semantic fields and relations was the teacher. In this research, the teacher still plays an important role as a demonstrator and facilitator to present examples of fields to the students without lecturing them on what kind of relations they had seen. The students were encouraged to practice categorizing vocabulary into groups or fields and then draw their semantic maps connecting those categories based on their thinking.

By following the semantic field processes proposed in this study, the students were evoked to memorize and recognize the meanings of vocabulary concerning their fields, pronunciation, and spellings repeatedly. From the researcher's observation, it was noticeable that the students could recall the meaning of the vocabulary found in their stories better and faster than the students who didn't use those words. Additionally, if the students got some hints showing semantic fields of the words, they were getting stuck on, they could recall the correct word faster. Furthermore, it was shown that the participants could remember concrete and familiar words such as chicken and cow better than abstract and unfamiliar words such as (to) breathe and goat. The word breathe presents abstract meaning and it is quite difficult for them to find a keyword or a relation to hook their memory. While, the word goat is concrete but unfamiliar for them because they hardly see any goats in their real lives to recall their memory. Therefore, this proposed semantic field teaching process might be effective for low proficiency students as Gang (2014) found that the fewer proficiency students in L2 vocabulary depend more on repetition and association learning strategy.

Above all, Tanner and Green (1989) said "... Research into memory has shown that we apparently store words in our brain in groups of related words (or lexical sets). Words that are related are joined together in our brains; if a new word can be hooked to words which are already store, it might be easier to remember it. It would seem logical therefore that we should teach words in lexical sets to our learners, so that it is easier for them to retain and store the words in their memory." Brown and Payne (1994), Nation (2001), and Kanolsilapatham and Khamkhien (2012) also suggested that vocabulary teaching and learning need a connection between meaning and sound, word, use or story, and illustration to encourage experiences related to the unknown or unfamiliar vocabulary. There is the correspondence between these suggestions and what Boers and Lindstromberg (2008) said as semantic and structural elaboration which operate in deep mental processes affecting longer-lasting memory trace that repetition [27]. Hence, it could be indicated that the most necessary key in the application of the semantic field to vocabulary teaching and learning is the "connection" and "repetition" that could help the students enhance their English vocabulary proficiency.

7. Conclusion

Applying the semantic field to vocabulary teaching and learning could be an alternative to enhance the learners' ability in studying vocabulary effectively as assumed from the result of this research. After 1 month of applying the semantic field to teach English vocabulary for Prathomsuksa 4 students, it was found that the students performed statistically better in the post-test. The questionnaires also showed their satisfaction with the method as they said that they were happy when they learned vocabularies and they wanted to learn more vocabularies.

8. Suggestion

The semantic network instruction processes could be further applied as experimental research to find out whether it would be more effective on high or low proficiency students.

Moreover, to develop English competence as the second or foreign language of illiteracy students more effectively, it might be necessary to apply the whole model of the integration of phonics, semantic fields, and syntax to English teaching and learning.

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