The Use of Problem-Based Learning Focusing on Dhamma to Promote English Reading Comprehension

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Abstract

The purposes of this study were 1) to explore students' satisfaction towards learning English through Problem-based Learning (PBL); 2) to compare the post-test mean score of English reading comprehension of grade seven students who have learnt through Problem-based Learning (PBL) with the pre-test mean score; and 3) to compare the post-test mean score of English reading comprehension of grade seven students who have learnt through Problem-based Learning (PBL) with the criteria of 60%. The samples used in this study were 35 students studying in grade seven, in the second semester of the 2018 academic year at Watsutthajinda School, Muang District, Nakhon Ratchasima. They were selected by cluster sampling. The research instruments consisted of a research questionnaire consisting of ten questions and English reading comprehension test consisting of 35 multiple choices questions. The questionnaire was used to explore students' satisfaction and English reading comprehension test was used to assess students' English proficiency after learning English through the Problem-based Learning (PBL). Statistics used in this study were Mean, Standard Deviation and Dependent T-Test.

The results of the study showed that:

1. Students were very highly satisfied with learning English through the Problem-based Learning (PBL) focusing on Dhamma.

2. The post-test mean score of English reading comprehension of the students learning English through the problem- based-learning (PBL) focusing on Dhamma was higher than the pre-test mean score at the level of .01 statistical significance.

3. The post-test mean score of English reading comprehension of the students learning English through the problem- based-learning (PBL) focusing on Dhamma was higher than the criteria of 60%.

Keyword: Problem-based Learning (PBL), Reading comprehension, Dhamma, Watsutthajinda

Introduction

English is the universal language, which is used as a medium language for communication throughout the world. Boonchum (2018) found that English is an official language in the world and lots of student learn it for communicating with people in other countries. There are four English skills that are necessary for students to learn: Reading, writing, speaking and listening.

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Among these four skills, Problem-based Learning (PBL) is an important technique to improve reading skill. Barrow and Tamblyn (1980) described that Problem-based Learning (PBL) is a learning model that encourages and develops students in thinking to focus on understanding and solving problems. Biggs (2003) confirmed that this process provides the students with the ability to study their own needs and learn from coping with the problem that arises in daily life. Then, they can find the solution to solve each problem. Webber (2015) mentioned that the process of Problem-based Learning (PBL) is accordance with current educational management which specifies that it is important to develop the learners to have a variety of abilities, help them learn, develop thinking skills and the process of solving problems. Students learn to work collaboratively to find solutions to real-life problems which aim at preparing them to live with happiness and peace of mind.

Reading comprehension is essential for human beings in the whole world. It is one of the most important skills for people to get information for their studies. Normally, people learn to read at a very early age with different purposes: Reading for pleasure, reading to understand, and reading to gain more knowledge and experience in order to understand what is happening around the society. People need reading comprehension as a way for lifelong learning. Tirawanchai (2007) and Vanichakorn (2003) pointed out that the large majority of individuals need to read to further their needs, particularly reading comprehension because the majority of societies are multilingual. English reading comprehension ability is then a great demand as English is used worldwide not only as a global language but also as the language of science and technology. In addition, reading comprehension is the primary means for independent learning, whether the purpose is performing in an academic mission or merely learning more to improve language ability.

Thai students learn English reading comprehension at school from kindergarten until the end of secondary school. The purpose of English departments is to encourage students a better use in the English language for communicating in daily life. Teaching English at school in Thailand has focused on four skills: Listening, speaking, writing, and especially reading comprehension skills. English reading comprehension helps students understand the necessary information that they receive in their daily life and students can use their English reading comprehension ability for further studies. Thus, efficient English reading comprehension skill is an easy skill to learn. Students can read everywhere and anywhere they like. Furthermore, English reading comprehension skill will empower students to gain more knowledge from English text information sources (Karnphanit, 1999). However, Longsombun (2017) found that Thai students' ability in English reading comprehension is not well enough to make them succeed in English reading comprehension even though they have practiced for many years. The students are unable to understand the meaning from reading passages.

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Watsuttajinda school is a Buddhist charity school. There are both lay-students and novice-students in the school. Hence, Dhamma can be appropriately used to promote their English reading comprehension ability. To successfully apply the Dhamma, it involves the conditions of theoretical knowledge and morality together with students' daily lives. In fact, Dhamma is the main purpose of education for students in Watsuttajinda school.

Therefore, the researchers are interested in solving students' English reading comprehension problems in Watsuttajinda school by applying Problem-based Learning (PBL) focusing on Dhamma. The researchers strongly believe that Problem-based Learning (PBL) is a learning model that encourages and develops students in thinking to focus on understanding and solving problems in learning English, therefore, the researchers are interested in conducting this study.

Literature Survey

Problem-based Learning (PBL) is a learner-centered approach to teaching and learning which is commonly constructed around a series of problems designed by teachers. In Problem-based Learning (PBL), students work in collaborative teams by solving problems in a sequential process under the facilitation of a teacher (Barrows, 2000; Schmidt,1992). Barrows and Tambyn (2014) also suggested a six step of Problem-based Learning (PBL): 1. The problem is encountered first in the learning sequence before any preparation or study has occurred; 2. The problem situation is presented to the student in the same way it would be presented in reality; 3. The students work with the problem in a manner that permits their ability to reason and apply knowledge to be challenged and evaluated, appropriate to their level of learning; 4. Needed areas of learning are identified in the process of solving problem and are used as a guide for individualized study; 5. The skills and knowledge acquired by this study are applied back to the problem to evaluate the effectiveness of learning and to reinforce learning; and 6. The learning that has occurred during working with the problem and in individualized study is summarized and integrated into the students' existing knowledge and skills.

In addition, the aspect of the problem must stimulate the interest of students, be an open-ended problem to arise from the actual situation, encourage discussion, exchange opinions and collaborate to solve problems using many methods (Barrows and Kelson, 1995). The encouragement of student's problem-solving skill and cooperative working ability as stated in the curriculum can be done through different Problem-based Learning. This is a collaborative learning process in which a group utilizes problem-solving and succeeds in collaboration and interacts to develop social skills and various learning (Hmelo-Silver, 2000). This process helps students make efforts to learn, work in sub-group and participate in group process analysis. It also develops social skills, ability to work and promote effective learning (Banathy, 1996).

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Problem-based Learning is a learning which begins with a problem; it helps students become active learners by learning from real world problems and letting students to be responsible for their learning. It has a dual emphasis on helping learners develop strategies and construct knowledge (Wilkerson, 1996; Barrows and Tamblyn, 1980; Bauer, 2002).

Problem-based Learning (PBL) is of great interest to educators because of its emphasis on active, transferable learning and its potential for motivating students (Bertalanfly, 1968). Brodeur (2002) said that Problem-based Learning approach is part of a standard mathematical process that is very important because in the learning and completion process students are allowed to use abilities and experiences that they must apply in solving non-routine problems. Delisle (1997) mentioned that Problem-based Learning approach is a strategy that students solve problems using systematic actions. The success of Problem-based Learning is not possible without the first representation of the problem property.

Dhamma is a set of moral values taught to enhance one's perception of the world. It can be taught within the curriculum where teachers integrate multiple dimensions, perspectives, and citizenship into everyday lessons. Phra Brahmagunabhorn (P.A. Payutto) (2015) and Pamojjo (2017) described that the Dhamma is the teaching of deliverance in its entirely, as discovered, realized, and proclaimed by the Buddha. It has been handed down in the ancient Pali language, and preserved in three great collections of books, called the "Three Baskets", namely: 1) Vinaya-pitaka, the collection of discipline containing the rules of the monastic order, 2) Sutta-pitaka, collection of discourse consisting of various books of discourses, dialogues, verses, stories, and dealings with the doctrine proper, and 3) Abhidhamma-pitaka, philosophical collection presenting the teaching of the philosophical form. Christmas (1997) defined Dhamma as five characteristics which are 1) Doctrine, any teaching set forth as a formulated system or the guiding principle accepted or followed by a man as applied to Buddhism or the teaching of the Buddha; 2) Right, righteous conduct or righteousness, law, justice; 3) Condition, cause or causal antecedent; 4) Phenomenon, Dhamma as an effect. It is always used in the plural and this sense is used in the first verse of Dhammapada: "All Dhammas are mind-created"; 5) Ultimate, reality, Dhamma is sometimes synonymous with ultimate reality. Channuwong, Ruksat and Ploychum (2018) described that Dhamma is the middle ways which can be implemented to solve the problems and difficulties of mankind, gradually reducing them to nothing. That is what is called Dhamma and that is what should be studied throughout our daily lives so that when some mental problems arise to us, we will be able to deal with them and go beyond them.

Objectives of the Study

1. To explore students' satisfaction towards learning English through Problem-based Learning (PBL).

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2. To compare the post-test mean score of English reading comprehension of grade seven students who have learned through Problem-based Learning (PBL) with the pre-test mean score.

3. To compare the post-test mean score of English reading comprehension of grade seven students who have learned through Problem-based Learning (PBL) with the criteria of 60%.

Research Methodology

This research is quantitative study. The researchers applied Problem-based Learning (PBL) in conducting this research. The study focused on the satisfaction of students towards learning English through Problem-based Learning (PBL) and English reading proficiency of students after learning through Problem-based Learning (PBL). In order to collect data, the researchers have developed a research questionnaire consisting of ten questions and English reading comprehension test consisting of 35 multiple choices questions based on literature survey and previous researches.

Data were collected from 35 students studying in grade seven, in the second semester of the 2018 academic year at Watsutthajinda School, Muang District Nakhon Ratchasima Province. The researchers distributed a research questionnaire consisting of ten questions and English reading comprehension test consisting of 35 multiple choices questions to the targeted samples, which were selected by cluster random sampling. The total samples completed and returned the questionnaire, which could be calculated as 100%.

Descriptive statistics consisting of percentage, mean, and standard deviation, and inferential statistics consisting of Dependent T-test were used to analyze data and test the research hypotheses respectively.

Results of the Study

This section presents the details of students' satisfaction towards learning English reading comprehension through Problem-based Learning, a comparison of mean score between pre-test and post-test, and post-test mean score with the criteria of 60%. This section is divided into the following three parts:

Part 1: Mean and Standard Deviation of Students' Satisfaction towards Learning English Reading Comprehension through Problem-based Learning (PBL)

The questionnaire was used to explore students' satisfaction towards learning English reading comprehension through Problem-based Learning focusing on Dhamma. The results of the study showed that students' satisfaction towards Problem-based Learning, in overall, was

at the highest level with mean score of 4.36 (S.D. 0.53). In particular, the question that after learning Problem-based Learning (PBL) lesson, students can apply the knowledge gained in their daily life had the highest mean score of 4.59 (S.D. 0.67), followed by the content of learning emphasizes appropriately on Dhamma, and the students like lesson of Problem-based Learning (PBL) with mean score of 4.45 (S.D. 0.51) and 4.45 (S.D. 0.60), the content of Problem-based Learning (PBL) activities promotes students' English reading comprehension skill, and the students satisfy the content given with mean score of 4.41 (S.D. 0.59), the learners agree that learning Dhamma can improve their reading skill, and the learners agree that the lessons focusing on Dhamma can suitably promote them learn vocabulary with mean score of 4.36 (S.D. 0.58), the steps of Problem-based Learning (PBL) can be easily understood, and Problem-based Learning (PBL) lessons increasingly help students understand Buddhism with mean score of 4.23 (S.D. 0.61), and Problem-based Learning (PBL) lessons help students to increasingly understand the reading texts with mean score of 4.14 (S.D. 0.71).

Part 2: The Comparison of Mean Score between Pre-test and Post-test through Problem-based Learning (PBL)

This section presents the results derived from a comparison of mean score between pre-test and post-test of students' English reading ability through Problem-based Learning focusing on Dhamma.

The English reading comprehension test consisted of 35 multiple choices questions. The results from pre-test and post-test of English reading comprehension of grade seven students were found that the students' pre-test mean score was at 15.77 (S.D. 3.91), or 39.42 percent and their post-test mean score was at 26.63 (S.D.4.65), or 66.57 percent from the total 35 scores. The comparison of mean score between pre-test and post-test of English reading comprehension of grade seven students is shown in table 1.

Table 1 The Comparison of Mean Score between the Pre-test and Post-test of Students' English Reading Ability

Mode of Assessment	N	Mean	S.D.	t	p
Pre-test	35	15.77	3.91	16.61	0.00
Post-test	35	26.63	4.65		

*P <.01

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Part 3: The Comparison of Post-test Mean Score of Students' English Reading Ability with the criteria of 60%.

The post-test mean score of English reading comprehension of grade seven students who had learnt through Problem-based Learning (PBL) was 66.7 percent, which was more than the criteria of 60 % at the level of 0.01 statistical significance. It could be concluded that Problem-based Learning focusing on Dhamma could help students improve their English learning as shown in Table 2.

Table 2 The Comparison of Post-test Mean Score of Students' English Reading Ability with the Criteria of 60%.

Assessment	N	Criteria of Standard Score 60%	Post-test	S.D.	t	Sig
English reading comprehension post-test.	35	66.7%	26.63%	4.64	16.61	.000

*p<.01

Discussion

The results of the study showed that students' satisfaction towards Problem-based Learning, in overall, was at highest level. This means that each student was very satisfied with this learning approach. Students liked learning strategy and technique that start with raising problems or issues, and then discussed to practice and find out the resolutions to each problem. The results of this study were also confirmed by Boud (2013) which found that Problem-based Learning (PBL) could help students to become reflective and flexible thinkers who could use knowledge to take action. These were relevant to a study of Barrows and Tamblyn (1980) which confirmed that Problem-based Learning could attract students and help them become active learning from problems in the real world, and let them be responsible for their learning. In particular, the question that after learning Problem-based Learning (PBL) lesson, students could apply the knowledge gained in their daily life had the highest mean score. The results of this study were relevant to the study of Brodeur (2002) which said that Problem-based Learning Approach was one of very important processes which allowed students to use their knowledge, abilities and experiences gained from the classroom to solve routine and non-routine problems.

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These were also relevant to the study of Krishnan (2006) which found that Problem-based Learning Approach was a strategy that students could apply to solve problems using systemic actions. The success of Problem-based Learning (PBL) was possible if the problem was represented properly, and find out the resolution to that problem. Holmbukt and Larsen (2016) and Jutharat Jitpranee, Albert Lisec and Prommin Songsirisak (2020) found that students had freedom to choose their topics for learning and discussing and to develop their responsibility, which facilitated their thinking skill, interaction and understanding of self-assessment.

The results of the study were relevant to the findings of Brodeur (2002) which confirmed that The Problem-based Learning (PBL) was collaborative technique of learning which could be perceived as relevant to the current situation of English learning; it was the collaborative learning which was considered as one of the instructional approaches to teaching and learning. In this matter, Barrows (2000) mentioned about Problem-based Learning (PBL) that students were encouraged to attend collaboration processes through their reflection and through the interdependence of learning within the group, but they did not necessarily know how to deal with the collaborative aspects of Problem-based Learning (PBL) effectively because the theme and topic of the Problem-based Learning were decided among the students in the groups from the beginning to the end. Students' English reading comprehension through Problem-based Learning (PBL) was successful when they could apply the knowledge of English reading comprehension to their active learning activities as a means of gaining information.

The students' mean score increased from 25.17 in the pre-test to 32.29 in the post-test. This could be confirmed that teaching English reading comprehension through Problem-based Learning focusing on Dhamma was effective. The data from the post-test of English reading comprehension test led to the conclusion that teaching English reading comprehension through Problem-based Learning focusing on Dhamma could improve English reading comprehension ability of grade seven students who were the samples of this study. Students could use their background of knowledge in Dhamma for their advantage of learning English. The results of this study were relevant to the study of Boonchum (2018), which studied English reading efficiency of Non-English-Major Students via context clues reading drills, and found that students' English proficiency according to the post-test mean score was higher than pre-test with statistical significance at .05 level after students were instructed via the context clues of English reading drills. The average mean score of the pre-test was 12.76 and the post-test was 16.17 from the total mean score of twenty.

The result of the students' answer to the questionnaires revealed that the students' satisfaction towards learning English reading comprehension through Problem-based Learning focusing on Dhamma was at the highest level. This means that students were very satisfied with Problem-based Learning (PBL), which they believed could help them improve their English.

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Moreover, study English through Problem-based Learning (PBL) focusing on Dhamma could help students understand the teachings of Buddhism as well as improving their English.

Conclusions

1. The results of the study showed that students' satisfaction towards Problem-based Learning (PBL), in overall, was at the highest level. In particular, the question that after learning Problem-based Learning (PBL) lesson, students could apply the knowledge gained in their daily life had the highest mean score, followed by the content of learning emphasizes appropriately on Dhamma, and the students liked lesson of Problem-based Learning (PBL), the content of Problem-based Learning (PBL) activities promoted students' English reading comprehension skill, and the students satisfied the content given, the learners agreed that learning Dhamma could improve their reading skill, and the learners agreed that the lessons focusing on Dhamma could suitably promote them learn vocabulary, the steps of Problem-based Learning (PBL) could be easily understood, and Problem-based Learning (PBL) lessons increasingly helped students understand Buddhism, and Problem-based Learning (PBL) lessons helped students to increasingly understand the reading text.

2. The students' pre-test mean score before Problem-based Learning (PBL) was at 15.77 or 39.42 percent, and their post-test mean score after Problem-based Learning (BPL) was at 26.63 or 66.57. Therefore, the post-test mean score of students' English learning ability through the Problem-based Learning (PBL) was higher than the pre-test mean score at 27.15 percent at the level of 0.01 statistical significance.

3. The post-test mean score of students' English reading ability after the Problem-based Learning (PBL) was at 66.7 percent, which was higher than the criteria of 60%.

Recommendations

Based on the research results, the researchers would like to give recommendations as follows:

1. Problem-based Learning (PBL) lessons could affect the students' performances in every single step of Problem-based Learning such as slides presentation and written reports. Therefore, students should be evaluated in both their writing report and overall evaluation.

2. Problem-based Learning (PBL) should be applied in all schools to improve English proficiency of students.

3. Students should be taught and trained to search for information from the internet and books to support their English reading comprehension.

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4. Problem-based Learning (PBL) focusing on Dhamma could help students to understand English, ethics, morality and teachings of the Buddha. Therefore, learning Dhamma in English through Problem-based Learning (PBL) should be supported.

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