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USING SCAFFOLDING TECHNIQUE TO IMPROVE MATTHAYOMSUKSA 3 STUDENTS' ENGLISH READING COMPREHENSION ABILITY

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สาขาวิชาการสอนภาษาอังกฤษสำหรับผู้พูดภาษาอื่น มหาวิทยาลัยราชภัฏอุดรธานี
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บทคัดย่อ

      การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อศึกษาและเปรียบเทียบความสามารถด้านการอ่านภาษาอังกฤษเพื่อความเข้าใจก่อนเรียนและหลังเรียนโดยใช้เทคนิคสแกฟโฟลดิงของนักเรียนชั้นมัธยมศึกษาปีที่ 3 และศึกษาเจตคติต่อการสอนอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิค สแกฟโฟลดิงของนักเรียนชั้นมัธยมศึกษาปีที่ 3 กลุ่มตัวอย่างที่ใช้ในการวิจัยคือนักเรียนชั้นมัธยมศึกษาปีที่ 3 โรงเรียนบ้านแสงสว่าง จังหวัดอุดรธานี สำนักงานเขตพื้นที่การศึกษาประถมศึกษาอุดรธานีเขต 2 ในภาคเรียนที่ 1 ปีการศึกษา 2564 จำนวน 18 คน ซึ่งได้มาโดยการสุ่มตัวอย่างแบบกลุ่ม แบบแผนของการวิจัยเป็นการวิจัยทดลองแบบกลุ่มเดียวสอบก่อนเรียนและสอบหลังเรียน เครื่องมือที่ใช้ในการวิจัยประกอบด้วย แผนการจัดการเรียนรู้ 12 แผน แบบทดสอบวัดความสามารถด้านการอ่านภาษาอังกฤษเพื่อความเข้าใจ และแบบวัดเจตคติต่อการสอนอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคสแกฟโฟลดิง ดำเนินการทดลองใช้ระยะเวลา 12 สัปดาห์ สัปดาห์ละ 2 ชั่วโมง รวมทั้งสิ้น 24 ชั่วโมง สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าเฉลี่ย ร้อยละ ส่วนเบี่ยงเบนมาตรฐาน การทดสอบทีแบบไม่อิสระและการทดสอบทีแบบกลุ่มเดียว ผลการวิจัยสรุปได้ว่า นักเรียนมีคะแนนความสามารถด้านการอ่านภาษาอังกฤษเพื่อความเข้าใจเฉลี่ยก่อนเรียนเท่ากับ 10.61 คิดเป็นร้อยละ 26.52 และคะแนนเฉลี่ยหลังเรียนเท่ากับ 31.33 คิดเป็นร้อยละ 78.33 ซึ่งสูงกว่าเกณฑ์ร้อยละ 70

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และเมื่อทดสอบความแตกต่างของค่าเฉลี่ยพบว่าความสามารถด้านการอ่านภาษาอังกฤษเพื่อความเข้าใจของนักเรียน หลังเรียนสูงกว่าก่อนเรียนอย่างมีนัยสำคัญทางสถิติที่ระดับ .01 และนักเรียนมีเจตคติต่อการสอนอ่านภาษาอังกฤษเพื่อความเข้าใจโดยใช้เทคนิคสแกฟโฟลดิงอยู่ในระดับดี

คำสำคัญ: สแกฟโฟลดิง, สแกฟโฟลดิงเทคนิค, การอ่านภาษาอังกฤษ, การอ่านภาษาอังกฤษเพื่อความเข้าใจ

Abstract

The purposes of this study were to study and compare Matthayomsuksa 3 students' English reading comprehension ability before and after studying using scaffolding technique and to investigate students' attitude toward teaching English reading comprehension using scaffolding technique. The sample consisted of 18 Matthayomsuksa 3 students at Bansaengsawang School, Udon Thani, under the Office of Udon Thani Primary Educational Service Area 2, in the first semester of the academic year 2021, selected by cluster random sampling. The research design was a one-group pretest-posttest design. The research instruments were 12 lesson plans, an English reading comprehension ability test and an attitude questionnaire toward teaching English reading comprehension using scaffolding technique. The experiment lasted 12 weeks, 2 hours a week, and 24 hours in total. The mean, percentage, standard deviation, t-test for dependent samples, and one sample t-test were used for data analysis. The findings indicated that the students' pretest and posttest mean scores on English reading comprehension ability were 10.61 or 26.52 percent and 31.33 or 78.33 percent, respectively. The students' posttest mean score on English reading comprehension ability was higher than that of the pretest, and it was higher than the set criterion of 70 percent. The comparison of the mean scores showed that the students' English reading comprehension

ability in the posttest was significantly higher than that of the pretest at the .01 level of significance, and the students' attitude toward teaching English reading comprehension using scaffolding technique was at a good level.

Keywords: scaffolding, scaffolding technique, English reading, English reading comprehension

Introduction

The English language has been one of the most important languages and the universal language of communication in the 21st century for people around the world. It is considered as a tool to access the modern world, to gain knowledge, to achieve higher education, to run a business, and to communicate with other people around the world (Ministry of Education, 1999). This is related to Fulcher (2007) who mentions that English is regarded as a required qualification for studying in international standard educational institutes and in working with foreign organizations.

Reading skills are important for expanding knowledge and gaining experience. According to Cohen (1998), reading skills are the basis for learners to understand rapid changes in society related to human connection around the world, and to the increased quantities of widely-available information as a result of technological and innovative progress. In addition, DeBoer & Dallmann (1970) state that reading is important to one's survival in a complex social system, and it is the means by which every age is connected to every other. Although reading is important, Thai students still lack ability to use English, particularly reading in English. According to Yoosabai (2009), English reading comprehension levels of Thai learners are low because of reading problems. For example, they cannot answer the questions after reading a text, they have a limit of vocabulary, grammar and syntactical skills to organize and interpret

the written text, reading materials, ineffective reading approaches, and inappropriate teaching reading methods in the classroom. Moreover, teaching English reading in Thailand has not gotten Thai people ready enough for rapid changes of the world. In addition, Hilden & Pressley (2007) claim that English language teachers often struggle with teaching reading comprehension strategies because of the complexity involved in designing purposeful comprehension strategy instruction. Also, a lot of reading comprehension progra ms are overwhelming in terms of time requirements for implementation. Adunyarittigun (2002) also indicates that the learners lack the systematic reading steps and strategies required to accurately retain the main concepts that are fundamental to comprehending text.

The scaffolding technique is one of the solutions for learners' reading struggles. Vygotsky (1978) defines the zone of proximal development as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers. According to Briner (1999), "this zone is the area of exploration for which the student is cognitively prepared, but requires help and social interaction to be fully developed." A teacher or more experienced peer is able to provide the learner with "scaffolding" to support the student's evolving understanding of knowledge domains or development of complex skills. Moreover, Van de Pol, Volman & Beishuizen (2010) propose that six scaffolding means should be involved in order to effectively implement the scaffolding technique: feeding back, hints, instructing, explaining, modeling, and questioning. With regard to the potential benefits of the scaffolding technique, some researchers studied the possible effects of implementing the technique on learners' English reading comprehension ability. As the study of Sriutthaman (2017), she studied the development of English reading

comprehension ability using scaffolding activities of the third year vocational certificate students. The findings showed that the posttest mean score was higher than the set criteria of 70 percent, and the students' attitude toward teaching English reading comprehension using scaffolding activities was at a good level.

Therefore, the researcher would like to apply six scaffolding means of Van de Pol, Volman & Beishuizen (2010): feedback, hint, instructing, explaining, modeling, and questioning, and also using the steps of teaching reading of Brown (2001): pre-reading activity, during-reading activity, and after-reading activity to improve the English reading comprehension ability of Matthayomsuksa 3 students at Bansaengsawang School, and whether studying scaffolding technique could improve students' English reading comprehension ability, and at what level of students' attitude toward teaching English reading comprehension using scaffolding technique.

Purposes of the Study

The purposes of the study were as follows.

1. To study and compare Matthayomsuksa 3 students' English reading comprehension ability before and after studying using scaffolding technique.

2. To investigate students' attitude toward teaching English reading comprehension using scaffolding technique.

Hypotheses of the Study

1. The students' English reading comprehension ability after studying English reading comprehension using scaffolding technique will be higher than the set criterion of 70 percent.

2. English reading comprehension ability of Matthayomsuksa 3 students after studying English reading comprehension using scaffolding technique will be higher than before the study.

Methodology

1. Research Design

This study was experimental research with a one-group pretest-posttest design. It was a quantitative research design (Campbell & Stanley, 1969).

$$T_1 \qquad X \qquad T_2$$

T_1 means   Pretest

T_2 means   Posttest

X   means   Teaching English reading comprehension using scaffolding technique

2. Sample

The sample group in this study was 18 students of Matthayomsuksa 3 studying Basic English (E23101) in the first semester of the academic year 2021 at Bansaengsawang School, Nongsaeng District, Udon Thani, under the Office of Udon Thani Primary Educational Service Area 2. These students were selected by cluster random sampling.

3. Research Instruments

Three research instruments were employed as follows.

3.1 Lesson plans of teaching English reading comprehension using scaffolding technique which consisted of 12 units with 2 hours a unit, 12 weeks, 2 hours a week and 24 hours in total. The value of the Index of Item Objective Congruence (IOC) was 1.00 for every item. The researcher applied the 6 scaffolding means of Van de Pol, Volman & Beishuizen (2010): questioning,

instructing, modeling, hint, explaining, and feedback together with the steps of teaching reading of Brown (2001): pre-reading activity, during-reading activity, and after-reading activity to teach English reading comprehension using scaffolding technique to Matthayomsuksa 3 students. The reading texts used in this study for teaching Basic English (E23101) of Matthayomsuksa 3 students were from Spark 3 textbook, Access 3 textbook and the internet based on the Basic Education Core Curriculum A.D. 2008 of the Foreign Languages Department (English). There are twelve reading texts including: 1) Making a Splash!, 2) Extreme Jobs Extreme Looks, 3) When Lightning Loves You, 4) Shark Attack, 5) Crime Doesn't Always Pay, 6) Monuments in Danger, 7) Greetings from Planet Earth, 8) The Perfect Green Home, 9) Should Animals Be Cloned?, 10) Life in a High-Tech Society... 40 Centuries Ago?, 11) Choices ... You Make Them, and 12) Extreme Sports.

3.2 An English reading comprehension ability test which was developed by the researcher based on the experts' suggestions to examine the students' English reading comprehension ability as the pretest and posttest. It was a multiple-choice test consisted of 40 items with four possible answer choices for each item. The value of the Index of Item Objective Congruence (IOC) was 1.00 for every item. The difficulty value of the items was between 0.25–0.78 and the discrimination value was between 0.21–1.00. The reliability of the test was 0.92.

3.3 An attitude questionnaire toward teaching English reading comprehension using scaffolding technique consisted of 20 items related to steps of teaching English reading comprehension using scaffolding technique, for example, English reading comprehension using scaffolding technique helps you understand the reading text better, using five point Likert's rating scales ranging from strongly agree, agree, not sure, disagree and strongly disagree based on Likert (1932). The value of the Index of Item Objective Congruence

(IOC) was 1.00 for every item. The scores from the attitude toward teaching English reading comprehension using scaffolding technique were analyzed in order to summarize and interpret the data based on Saiyos, L. and Saiyos, A. (2000) as follows; the average scores 4.50–5.00 means Very good, the average scores 3.50–4.49 means Good, the average scores 2.50–3.49 means Fair, the average scores 1.50–2.49 means Poor, the average scores 1.00–1.49 means Very poor.

4. Data Collection

Before collecting data, the proposal of the research and the research instruments were submitted for ethics in human research. Then, the researcher handed in the research instruments to three experts in order to examine the correctness, and relation between the objectives and learning activities and evaluation. After that, a lesson plan of teaching English reading comprehension using scaffolding technique and the English reading comprehension ability test were tried out in a pilot study with 40 Matthayomsuksa 3 students in Bannadeekokklang School and Bannafai School who did not take part in this study in the first semester of the academic year 2021. Then, the researcher revised the lesson plans based on the information obtained from the pilot study and selected 40 items of the test with the difficulty value between 0.25– .78, the discrimination value between 0.21–1.00, and the reliability of the test was 0.92. The researcher collected data as the following steps.

4.1 The researcher administered a pretest for students who enrolled in Basic English (E23101) to evaluate their English reading comprehension ability using an English reading comprehension ability test. Students had one hour to finish the test.

4.2 The researcher conducted teaching following the lesson plans that were developed by the researcher.

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4.3 After finishing teaching, the researcher conducted the posttest which was the same test as the pretest to evaluate students' English reading comprehension ability in one hour.

4.4 The researcher distributed the attitude questionnaire to students to examine the students' attitude toward studying English reading comprehension using scaffolding technique.

4.5 The researcher collected scores from the pretest, the posttest and the students' attitude questionnaire. The collected scores were statistically analyzed and interpreted later on.

5. Data Analysis

The data were statistically analyzed as follows.

5.1 The mean ($\bar{X}$), percentage, and standard deviation (S.D.) were used to analyze students' English reading comprehension ability.

5.2 One–sample t–test was used to compare students' English reading comprehension ability and the set criterion of 70 percent.

5.3 The t–test for Dependent Samples was used to compare students' pretest and posttest mean scores.

5.4 Mean ($\bar{X}$) and standard deviation (S.D.) were used to investigate students' attitude toward teaching English reading comprehension using scaffolding technique.

Results

Results of the study and comparison of scores on English reading comprehension ability before and after teaching English reading comprehension using scaffolding technique were as follows.

Table 1 Comparison of the students' English reading comprehension ability before and after studying English reading comprehension using scaffolding technique of students

Test	n	$\overline{X}$	S.D.	Percentage	t
Pretest	18	10.61	3.86	26.52	29.64**
Posttest	18	31.33	3.94	78.33	

** p≤.01

From Table 1, the students' pretest mean score on English reading comprehension ability was 10.61 or 26.52 percent and the posttest mean score was 31.33 or 78.33 percent. The results showed that the students' English reading comprehension ability before and after studying English reading comprehension was significantly different at the .01 level. The posttest mean score was significantly higher than the pretest mean score.

Table 2 Comparison of the students' English reading comprehension ability afterstudying English reading comprehension using scaffolding technique and the set criterion of 70 percent

Test	The Set Criterion of 70 Percent (28 out of 40 scores)				
	n	$\overline{X}$	S.D.	Percentage	t
Posttest	18	31.33	3.94	78.33	3.59**

** p≤.01

Table 2 shows the students' posttest mean score on English reading comprehension ability. The posttest mean score was significantly higher than the set criterion of 70 percent at the .01 level of significance.

Table 3 Mean results of the students' attitude toward teaching English reading comprehension using scaffolding technique

Attitude Test	n	$\overline{X}$	S.D.	Interpretation
Attitude toward Teaching English Reading Comprehension Using Scaffolding Technique	18	4.48	0.62	Good

Table 3 shows that the mean score of the students' attitude toward teaching English reading comprehension using scaffolding technique was 4.48. It indicates that the students' attitude toward teaching English reading comprehension using scaffolding technique was at a good level.

Conclusion

The results of the study can be summarized as follows.

1. The students' pretest and posttest mean scores on English reading comprehension ability were 10.61 or 26.52 percent, and 31.33 or 78.33 percent, respectively. The students' posttest mean score on English reading comprehension ability was significantly higher than that of the pretest at the .01 level of significance, and the mean score on the posttest was higher than the set criterion of 70 percent at the .01 level of significance. The students' English reading comprehension ability after the experiment was significantly higher than that of the pretest.

2. The students' attitude toward teaching English reading comprehension using scaffolding technique was at a good level.

Discussion

The results of the study can be discussed as follows.

1. Results of the comparison of English reading comprehension ability of Matthayomsuksa 3 students at Bansaengsawang School before and after studying English reading comprehension using scaffolding technique reveal that:

1.1 Teaching English reading comprehension using scaffolding technique could improve Matthayomsuksa 3 students' English reading comprehension ability. Their pretest and posttest scores were 10.61 or 26.52 percent and 31.33 or 78.33 percent, respectively. This finding supported the second hypothesis. The students' English reading comprehension ability after studying English reading comprehension using scaffolding technique was higher than before the study. This is because the students had a chance to practice English reading comprehension using scaffolding technique, they could identify the meaning of new words in the reading text, predict information to be encounter in new learning, summarize the main idea of the reading text and expanding reading comprehension knowledge in literal, interpretation, and critical or evaluative comprehension. This finding supported the idea of Van de Pol, Volman & Beishuizen (2010) who suggested that the forms of scaffolding is the forms of arranging the teaching process by emphasizing on showing how to do the task, assisting, directing the activities, decreasing the supports and giving feedback. The results of this study provided evidence that scaffolding technique influenced students' English reading comprehension ability.

1.2 The students' English reading comprehension ability after studying English reading comprehension using scaffolding technique was significantly improved with a mean score greater than the set criterion of 70 percent. This finding supported the first research hypothesis of the study. This may cause from the following reasons:

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Firstly, teaching English reading comprehension using scaffolding technique helped develop students' English reading comprehension ability because this technique supported the learners to improve their reading comprehension ability by providing the opportunity for students to find the meanings of vocabulary and the main ideas in each part of the reading text, and developed skills to work with others. The finding supported the idea of Alyousef (2006) that reading is an interactive process between a reader and a text which leads to reading fluently. In this process, readers interact dynamically with the text in order to elicit the meanings using various kinds of knowledge through linguistic knowledge as well as schematic knowledge.

The results of this study showed that students' posttest mean score was 31.33 or 78.33 percent. It was higher than the pretest because students were trained through various kinds of activities used in scaffolding technique, such as previewing a text and answering WH- questions about the reading text as the prediction, finding the main ideas and supporting details in the reading text, discussing the information with the teacher and classmates, and summarizing the reading text and presenting it to the class. In addition, the students had a chance to improve their reading comprehension with student–directed learning. This supported the ideas remarked by Van de Pol, Volman & Beishuizen (2010) that six scaffolding means should be involved in order to achieve the goals of learning. Therefore, teaching English reading comprehension using scaffolding technique could help students improve their English reading comprehension ability.

Secondly, teaching English reading comprehension using scaffolding technique helped the students improve their English reading comprehension ability. This study was conducted in the following stages, according to teaching English reading comprehension activities using scaffolding technique based on the ideas of Van de Pol, Volman & Beishuizen (2010), and the steps of teaching

reading of Brown (2001). In the pre-reading activity, the teacher aroused and motivated students to connect their background knowledge and experience by showing a picture related to the reading text, and taught the students new vocabulary, structures and expressions. The students previewed the reading text and answered WH- questions about the reading text as the predictions in their group. In the during-reading activity, the students read the reading text, wrote the main idea and supporting details of the reading text then the teacher and students discussed the main idea and supporting details together. The teacher let the students answer the questions and write a summary of the text in order to check their understanding. In the after-reading activity, the representative of each group presented their summary to the class then the teacher and the other groups gave feedback. After that, the students did the reading comprehension quiz. Finally, the teacher and students summarized the lesson together. Therefore, it could enhance the students' English reading comprehension ability and initiate the higher score of the posttest. These findings supported to the idea of Brown (2001) who mentions that three steps of the reading process help students systematically practice reading strategies for acquiring the information of the text.

The results of this study supported the study of Jitjinda (2014) who developed students' English reading comprehension ability using scaffolding activities. The results of Jitjinda (2014) indicated that the students' pretest and posttest scores of English reading comprehension ability were 40.68 percent and 71.82 percent, respectively. The posttest score was not less than 70 percent. The students' reading comprehension ability after the experiment was higher than that of the pretest at the significance level of .01. In addition, the results of this study also supported the study of Wachyunni (2016) who studied the effectiveness of scaffolding strategy in EFL reading comprehension. The findings of Wachyunni (2016) showed that scaffolding provides a differential

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effect on reading comprehension gain for the lower and higher ability students in the experimental group. In addition, it is suggested that the lower students of scaffolding group benefited more in terms of reading comprehension gain than the higher ability students.

2. The findings of an investigation of students' attitude toward teaching English reading comprehension using scaffolding technique was rated at a good level. The results showed that teaching English reading comprehension using scaffolding technique could help students understand the reading text. The students reported that they had chances to exchange the information and ideas among friends in group. The results were consistent with the idea of Gibson (2000) who states that attitude is the judgment of behavior. It is a positive or negative feeling that influences the response of person to people or events. In addition, the attitude questionnaire specified that students strongly agreed that group work helped them exchange information and ideas among friends and they enjoyed learning with less anxiety. The students liked the finding the main idea and supporting details activity because they had opportunity to exchange their ideas in their group.

This led students have good attitude toward teaching English reading comprehension using scaffolding technique and it could enhance students' English reading comprehension. The results supported the idea of Sroinam (2012) who suggested that attitude is an individual's feeling toward something or someone that depends on beliefs and understanding and it is seen from their behaviors. Hence, learners with positive attitudes would have attitudes reinforced. Furthermore, they reported having fun and enjoyed doing reading activities using scaffolding technique which was supported by Brehm, Kassin, & Fein (2002) who defined attitude as a positive, negative, or mixed reaction to a person, objects, or idea.

Recommendations

1. Recommendations from the Study

The researcher proposes the recommendations as follows.

1.1 The students' English reading comprehension ability after studying English reading comprehension using scaffolding technique was higher than before the study. This caused from scaffolding technique helped students activa te their background knowledge, understand and summarize the reading texts using six scaffolding means; feedback, hint, instructing, modeling, explaining, and questioning. Therefore, English teachers should apply scaffolding technique to teach English reading comprehension to improve students' English reading comprehension ability.

1.2 The students' attitude toward teaching English reading comprehension using scaffolding technique was rated at a good level. This caused from students who enjoyed doing activities through scaffolding technique. The scaffolding technique provided activities to motivate students' attention with less anxiety. Therefore, English teachers should apply scaffolding technique to teach English reading comprehension to improve students' English reading comprehension ability.

2. Recommendations for Further Study

The researcher proposes for further studies as follows.

2.1 Researchers should use scaffolding technique to study other English skills such as listening, speaking, and writing, in order to know whether scaffolding technique would be able to improve those skills as well.

2.2 Researchers should investigate English reading comprehension ability using scaffolding technique for students with various educational background knowledge and different levels of education in order to know whether scaffolding technique would be able to improve English reading comprehension of students in other levels.

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