



Improvement of English Reading Comprehension by Using The Jigsaw Technique for Grade6 students

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ABSTRACT

The aims of the research were to 1) to study the effectiveness index (E.I.) of reading comprehension ability lesson plan based on the jigsaw technique, 2) to compare the achievement reading comprehension ability before and after learning by the jigsaw technique, and 3) to study the attitudes of students toward learning by using the jigsaw technique. The participants were 20 Grade6 students during the second semester of the 2017 academic year at KhokKhonWittayakom School; primary school in Kalasin province, in the northeastern of Thailand. The research instruments used in the study were (1) The Jigsaw Technique Instructional Plan, (2) Achievement test, and (3) Satisfaction questionnaire. Mean and standard deviation were used to analyze, and compare the pre- and post- test scores by t-test.

The research results found that (1) the English reading comprehension ability of students after used the instructional plans rose up at 0.6371 level or 63.71%, (2) the students' mean score on the pretest and posttest in English reading comprehension skill improved from 13.05 (pretest) to 23.85 (posttest) score with statistically significance at 0.05 level, and (3) The students were satisfied in learning English reading comprehension through the Jigsaw Technique.

Keywords: Reading Comprehension; Jigsaw Technique



INTRODUCTION

In the world of infinite communication, we make use of English for various purposes. We use it for business matters, interviews, television broadcast, reading newspaper or other books, writing messages (e.g., notes, articles, mails) and other general daily communications. It is inevitable that English is the most powerful language at present. It is estimated that more than 300 million people use English as a second language. In term of language learning, reading is viewed as an effective way to learn a language. It also seems to be the most attainable language skill for learners in countries where English is not widely spoken. In ESL and EFL countries, reading texts are the fundamental source for language exposure. (Ellis, 2010).

Reading is a thought process that requires drawing from the knowledge that the reader has already acquired. Learners use reading as a tool for studying and acquiring English and to gather information for the professions of medicine, science, technology and law, among others. Moreover, most of the assignment at the education level involve reading to acquire researching. Students depend on effective reading to acquire knowledge. Poor reading may interfere with a students' overall achievement. It is a fact since reading plays an important role in getting information and knowledge from original resource, foreign language, thus teachers should attribute importance to teaching reading comprehension in their class.

With the needed of English skills, of the four language modes (listening, speaking, reading and writing), reading is one of the four main skills for gaining knowledge and experience. Every skill has its importance as well the most necessary skill is probably reading as most of them do not need to use English in everyday communication

but they need the knowledge of English as a key to other world knowledge. As Anderson (1999) has asserted, "for many reading is the most important skill to master. With strengthened reading skills, ESL/EFL readers will make greater progress and attain greater development in all academic areas"

However, Fowled (2000) points out that many Thai learners have problems in reading English. Moreover, teaching techniques in reading are neglected in classes. Therefore, in teaching/learning process, teachers play an important role in encouraging and supporting learners to develop reading skills, and teachers should implement teaching techniques in reading classroom in order to develop English reading skills. There are several techniques, such as using games, storytelling, SQ3R, KWL to improve students' reading skill. One of the important techniques which can be used to develop learners' reading comprehension effectively is using the jigsaw technique.

KhokKhonWittayakhom School is one of the schools in Kalasin Province that also has problems in teaching English reading and language learning. According to the score of English in O-NET achievement report reference of 2015 test for Grade 6 students (Grade 6), the mean scores of the school were lower than mean level score of the school's standard. After interviewing English teachers, the most common problems found in the classroom was students with a learning disability in reading comprehension can read aloud with little or no difficulty pronouncing words, but they do not understand or remember what they have read. This is because most of the students in KhokKhonWittayakhom School are rural students who come to school just to get a certificate from school to find a job after finishing basic education level. Consequently, they do not have a good attitude toward learning nor do they know how English



would benefit their daily lives and so they become bored with learning language without interesting activities. (Schiefele, 1991)

According to Johnson (2005), cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

Jigsaw, which is a kind of cooperative learning, is widely used in many places through this method, students are active in the learning process. They will learn more through a process of constructing and creating, working in groups and sharing knowledge. This method is believed to give chances for students to be involved in discussion, have courage and critical thinking and is willing to take responsibility for their own learning. Although students' role is considered most important, it does not mean that the teacher is not participating. In fact, in the cooperative learning process, the teacher is a facilitator (Qiao and Jin, 2010).

The jigsaw technique, which was introduced by Aronson et al (1978) to improve peer cooperation and create team solidarity among students through division of task, involves each student in a group to assume learning responsibility. Accordingly, students work in two different groups: main groups and jigsaw groups. First, students come together in their main groups. The main groups are divided into pieces like a jigsaw puzzle, and students join the jigsaw groups thus formed. These jigsaw groups consist of the group members from

that come together to study the information they learned with the members of their own main group (Clarke, 1999)

Steps of Carrying out the Jigsaw Technique

The following are the steps of the jigsaw technique (Parker, 2000, cited in Siriwan, 2012):

1. Students are divided into 4-, 5- or 6-person jigsaw groups. The number in each group depends on the number of subtopics.
2. Each member of the group is assigned a subtopic of the material.
3. Each student who has the same assigned subtopic meets with the members of the other groups to form the expert group.
4. Students in the expert group learn the material together and decide on how to teach the material to the original groups.
5. Students return to their original groups, whose members are each now an expert in one of the different topics being studied, and teach their members what they have learned and discussed in the expert group.
6. The teacher needs to move from group in order to observe the process. He/She intervenes if necessary, such as a member being dominating or disruptive. There will come a point that the group leader should handle this task. Teachers can whisper to the group leader as to how to intervene until the group leaders can effectively do it himself.
7. At the same end of the session, a quiz is given to check students' knowledge after learning. At that time on team members may help each other.

Because of the importance of reading comprehension and the problems of reading, teaching and the advantages points of educational technique mentioned above, the



researcher as one of English teachers in this school aimed at using educational technique to improve the students' English reading comprehension. The researcher believes that the jigsaw technique will help students learn, share knowledge together and they will understand the whole meaning what they have read. Jigsaw is one of the best known cooperative learning techniques. For example, a reading passage on the causes and solutions to the problem of air pollution is divided into parts, just like a jigsaw puzzle is divided into pieces. Therefore, the main purpose of this study is to study the development of English reading comprehension ability for Grade6 students in KhokKhonWittayakhom after learning through the jigsaw technique.

Objective of the Study

1. To study the effectiveness index (E.I.) of reading comprehension ability lesson plan based on the jigsaw technique.
2. To compare the achievement reading comprehension ability before and after learning by the jigsaw technique.
3. To study the attitudes of students toward learning by using the jigsaw technique.

Research Hypothesis

The Grade 6's reading comprehension ability after learning through the Jigsaw Technique is higher than before learning

Scope of this the Study

1. The population of the study consisted of 20 students of Grade 6 students in the KhokKhonWittayakhom, AmphueMueangKalasin, Kalasin Province. The experimental period of the study was 10 periods (10 hours) through 5

weeks, 2 periods a week, in the second semester of the 2017 academic year.

2. The content and vocabulary in this study was taken from lessons 6-10 of the "Say Hello" book for Grade 6 on the topics of "Our Neighbors", "We Are Friends", "Famous People", "My Plan" and "Good Children".

Research Methodology

1. Population

The population in this research included 20 students of Grade6 who were studying in the second semester of the 2017 academic year in the KhokkhonWittayakom School, MueangKalasin, Kalasin Province.

2. Research Instruments

The research instruments used in the study were

- 2.1 The Jigsaw Technique Instructional Plan
- 2.2 Pretest and Posttest on reading skill
- 2.3 Satisfaction questionnaire.

Data Collection

The research was undertaken according to one-group pretest- posttest design.(Jacobs, G.M, 2015)

In a one-group pretest-posttest design, a pretest was constructed to evaluate participants' background knowledge (O1), followed by teaching using jigsaw technique (X), then the posttest was conducted (O2). The experimental procedures were divided into 4 stages:

1. In the first week, the participants including 20 Grade 6 students were informed of the purposes of the course syllabus. Then, they were tested by a pretest exam that consisted of thirty items. The purpose of this pretest was to investigate the background knowledge of the population. The scores of each population were collected as data for this study.



2. In the second to the sixth week, teaching and learning was carried out, using the lesson plans that the researcher had constructed. One plan covered 2 periods in each week. Within each week, students had to do the exercises that related to the contents of the plan.

3. In the seventh week, the population was tested again by posttest which was the same test as pretest. The purpose of this posttest was to estimate the progress and success of the participants. The scores of participants were collected as data for this study.

4. In the eighth week, the population answered the questionnaire asking about their attitude towards English reading comprehension by using jigsaw technique. The scores of the opinions of the participants were collected as data for this study.

2. The Comparison of English reading comprehension ability of students by using the jigsaw technique was analyzed by comparing the students' mean score between pretest and posttest by using mean, standard deviation (S.D) and t-test (dependent sample). (Boonchom Srisa-ard, 2011, p.95)

3. Satisfaction of students toward learning by using the Jigsaw Technique for English reading comprehension were investigated by agreement level, rating scale and analyzed by mean and standard deviation (S.D).(Paisarn Worakham, 2015, pp. 313-385)

RESULT OF THE STUDY

The results of the analysis revealed that

1. the English reading comprehension ability of students after used the instructional plans rose up at 0.6371 level or 63.71%

2. the students' mean score on the pretest and posttest in English reading comprehension skill improved from 13.05 (pretest) to 23.85 (posttest) score at 0.05 level of significance

3. The students were satisfied in learning English reading comprehension through the Jigsaw Technique.

Table 1 The students' activities

Lesson	Activities	Duration /hours	week
1.our neighbor	Regular activities	4	1-2
	Jigsaw activity	2	
2. We are friends	Regular activities	4	3-4
	Jigsaw activity	2	
3. Famous people	Regular activities	4	5-6
	Jigsaw activity	2	
4. My plan	Regular activities	4	7-8
	Jigsaw activity	2	
5. Good children	Regular activities	4	9-10
	Jigsaw activity	2	

Table 2 The effectiveness of the lesson plan to improve English reading comprehension of Grade 6 students by using the jigsaw technique.

Number of students	Total score of the test	Pre-test	Post-test	Effectiveness Index : E.I
20	30	261	477	0.6371

Data Analysis

The Data analysis is presented as 3 parts:

1. The effectiveness of the lesson plan was analyzed by the effectiveness index (E.I.). (Somnuk Patthiyatane, 2003, pp.218-220)

From the above table demonstrates the effectiveness index (E.I.) was 0.6371 showing the English learning ability of



students after used the lesson plans rose up at 0.6371 levels or 63.71%.

Table 3 The result of English attitudes scores of students after application of the jigsaw technique

The attitudes of students towards the English reading comprehension by using jigsaw technique	\bar{X}	S.D.	Rating scale
1. I like reading in English	4.9	0.218	Strongly Agree
2. I find it easy to learn to read in English	4.8	0.476	Strongly Agree
3. I often practice reading in English out of class.	4.9	0.300	Strongly Agree
4. I want to have better English reading ability	5	0	Strongly Agree
5. Going to English reading classes is a good time	4.9	0.300	Strongly Agree
6. I have no problem with all the tests I read.	4.7	0.622	Strongly agree
7. I like to learn new vocabulary through games.	5	0	Strongly Agree
8. I enjoy learning English through jigsaw technique with my friends.	5	0	Strongly Agree
9. I often read in English for whatever purpose I have.	4.9	0.477	Strongly agree
10. Reading English texts makes me happy.	4.8	0.357	Strongly agree

Table 3

The attitudes of students towards the English reading comprehension by using jigsaw technique	\bar{X}	S.D.	Rating scale
11. There should be more time for practice in reading classes.	4.7	0.556	Strongly agree
12. In my future day, I will take an English reading course as my subject choice.	4.9	0.734	Strongly agree
13. I wish there were more time for learning to read in English.	4.9	0.476	Strongly agree
14. I got much knowledge and vocabulary when I study English class.	4.9	0.3	Strongly agree
15. I feel confident when I speak English.	4.8	0.357	Strongly agree
Total	4.84	0.47	Strongly Agree

4. According to the result of the study, the effectiveness index was 0.6371, meaning that the English reading comprehension of the students after learning through the developed lesson plan rose up at 0.6371 levels or 63.71%. It also found that the lesson plan could help the students improve their reading comprehension. It found that students produced the gradually increasing scores from pretest to posttest as shown in Table 4.1. When the students worked in group and learned reading passage by using the jigsaw technique; the researcher found that the talent students, their reading was better after treatment. Moreover, they could describe the details of the



passage. When they working in group and learning reading by using the jigsaw technique, they were more confidence to pronounce the difficult words and they are not serious.

5. The Comparison of the English reading comprehension of students between pre-learning and post-learning. The achievement scores of pretest and posttest were different at the .05 level of significance. The different mean score of the posttest and pretest were 10.80000, t-test was 17.08485 as shown in Table 4.2 and the standard deviation was 2.08440. The score of posttest of students are higher than the pre-test after learning through games was different at the .05 level of significance meaning that the students' English reading comprehension were improved after learning through the jigsaw technique. It can be said that the use of the jigsaw technique could improve students' English reading comprehension skill. The gradual increase of students' scores revealed the improvement of their reading skills. After using the jigsaw technique, the students were able to read and able to compose long reading passage and more structured sentence.

6. The result of students' attitude towards English reading comprehension by using the jigsaw technique showed that after the researcher taught the students through the jigsaw technique, the attitude of the students was evaluated by using a questionnaire and the data from the questionnaire was rated by a 5 rating scale. The results of the questionnaire showed that students were highly satisfied with learning English reading comprehension by using the jigsaw technique

Within eight weeks of many activities, some students complained that too much reading comprehension bored them. This was the only negative attitude towards the learning activities based on using jigsaw technique.

However most of the students had much more positive attitudes towards the learning through the jigsaw technique in many ways

DISCUSSION

1. The effective index of the instructional plans to improve Grade 6's English reading comprehension ability by the jigsaw technique was 0.6371, showing that the English learning ability of students after using the developed plans increased 63.71%. This was because the lesson plans contained interesting activities and content. The jigsaw technique allow learners to learn and share knowledge together at the same time, Not only fun, interesting and challenging but the jigsaw technique also increase learners' achievement because the technique can involve all the basic language skills, i.e., listening, speaking, reading, and writing, and a number of skills are often involved in the same process (Shaaban, 2006) and The jigsaw technique has become the most frequently used method of collaborative learning, for it possessed a very flexible structure with its many different learn" skill, which is a necessity of both modern educational system and science education involving different scientific process skills. Using student-centered instructional methods and techniques to "teach students to learn" in modern educational systems will help students' knowledge to be permanent, and thus it will aid them to reflect this knowledge on their daily lives Tardtong, K. (2009). besides, the instructional plans were suitable for the students' level, were consistent with the objectives, and encouraged students to change their learning behaviors by their own abilities, made students acquire skills. A good instructional plan allows learners to understand the content in the lesson, step by step following the teachers' instruction. Before the instructional



plans were used, they were totally checked and reviewed by the experts and tried out to check the effectiveness before being used. The students were an important factor in this research; the students who were the sample group were responsible and enthusiastic in learning. The finding is in line with the study by who studied Development of English Reading Comprehension of Grade 6 Students through Jigsaw Technique which found that The achievement scores after learning through the jigsaw technique for Grade 6 students were higher than pretest scores, different at the .05 level of significant and the effectiveness index was at 75%.

2. The research showed that students' achievement in English reading comprehension which conducted the jigsaw technique in experimental class is higher than before studying through jigsaw technique. The English reading comprehension of students was improved. The mean score in posttest were higher than pretest and the mean score in every lesson. This was different at the .05 level of significance. That was because of the jigsaw technique motivated to learn with team (Hevedanli, M., and Akbayın, H. (2006) and the jigsaw technique promotes effective learning and increases learner motivation, interdependence and social and linguistic communication skill. Accordingly, students work in two different groups: main groups and jigsaw groups. First, students come together in their main groups. The main groups are divided into pieces like a jigsaw puzzle, and students join the jigsaw groups thus formed. These jigsaw groups consist of the group members from different main groups that come together to study the same subject. After learning the subject in a jigsaw group, students return to their main groups and share the information they learned with the

members of their own main group. Jigsaw is a method of cooperative learning that involves each member in the activity and engages him/her with the material. The finding is in line with studies by, Rubin, J. and Thompson, I. (1994). which found that after using the jigsaw technique in teaching process the post-test score of most students were higher than the pre-test score and the mean testing score in pre-learning and post-learning and items in school categories are different with statistical significance at 0.05. The jigsaw technique was an instrument that helped learner to have a responsibility, positive interdependence and teamwork skills. This also motivates and engages learners with the material in every part of the activity, which enables them to practice the four language skills and enhances effective learning and critical thinking skills. Apart from this, the activity takes the pressure off the teacher, since he/she becomes a facilitator while students' peer teaches each other.

3. The students' attitude toward English reading comprehension by using jigsaw technique as the result shown in Table 4.6, Chapter 4 the attitude of students after learning through jigsaw technique. The results show that the students' attitude toward learning English reading comprehension by using jigsaw technique rated at 4.84 which means students were satisfied with the learning activities at a high level. Students had good attitudes towards cooperative learning; jigsaw technique. While doing all activities, students looked relaxed. They learnt with laughter and free of stress because they knew that they were not alone in learning. They had peers in helping them to learn. For example, when they did not get the meaning of the word, they had their friends to give them explanation. The students who gave the answer felt good about themselves since they were able to help



their friend to learn. Moreover, students had tangible goals for all tasks. They felt free to design what they want to present in front of the class.

Based on the attitude questionnaire form, the most enjoyable activity was learning together with their friends. In this activity, students could share and learn together through activity is process of jigsaw. This made the class have a relaxing and enjoyable atmosphere.

RECOMMENDATION

1. English teacher should be able to create an interesting atmosphere in classroom by managing the class and using appropriate depends on student needs.
2. English teacher should be able to give motivation to his/her students in learning English, because the motivation is the most important factor in learning.
3. In order to motivate students in reading, it is better for teacher to divide jigsaw group randomly and each jigsaw groups should consist of various students (difference social background, intelligent background, and gender)

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