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The Use of Learning Cell on Students' Reading Comprehension

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Abstract

Reading comprehension is a process of constructing meaning from the text during reading. Students not only can read the text but also comprehend the writer's message in the text. However, the difficulty of comprehending text during reading is a problem for students. Learning Cell technique is the solution to solve the problem. The aim of this research is to investigate the use of Learning Cell technique on students' reading comprehension. In conducting this research, the researcher applied pre-experimental method and one group pretest and posttest design. This research is conducted in the eleventh-grade students of *SMA Yadika 7 Bogor*. There were 29 students as the sample of this research by using random sampling. The result shows that based on t-table, the degree of freedom of 28 at significant level of 0.05 is 2.048. However, the value of t-test is 6.09. From the comparison between the value of t-test and the t-table, it can be concluded that the value of t-test is higher than t-table (6.09>2.048). Thus, the alternative hypotheses of this research (Ha) is accepted. Therefore, Learning Cell technique affects students' reading comprehension.

INTRODUCTION

Reading is a source of knowledge. By reading students can get a lot of knowledge that are developed or have evolved though (Kałdonek-Crnjaković, 2020). Everything students do is never separated from the act of reading, especially the students who are required to read a lot of books (Klingner et al., 2015). The students are hunter of science, so the book is a major source of knowledge for them. Hence, reading is very important to develop students' knowledge (Moreillon, 2007).

In teaching and learning process, technique is important. Teacher needs an appropriate technique in the teaching and learning process, otherwise

the teaching of reading can be used in the class to deliver knowledge because technique is one of important elements in teaching and learning process (Sutisna et al., 2020). It is very necessary for teacher to know various types of techniques in teaching English (Patel & Jain, 2008). It means that teacher should know many techniques of teaching English especially in reading class. One of techniques for teaching reading in the class is Learning Cell technique (Hidayah & Rais, 2014).

The Learning Cell was developed by Goldschmid of the Swiss Federal Institute of Technology in Lausanne. In this research, the cell does not stand for a phrase. It is not also part of body biologically. The Cell in this research means a group of students which consist of two or more students and it called by cell (Rakhmawati, 2015). According to Barkley et al., (2014) in Learning Cell, students individually develop questions about reading assignment and alternate asking and answering each other's questions. It means that in this technique, students in one cell facilitate to learn together from their pairs by asking and answering each other's based on the text given (Peni, 2018). So, Learning Cell technique is a process of learning where two or more students in one cell facilitate to learn together from their pairs by asking and answering each other's based on the text given (Pourhosein Gilakjani & Sabouri, 2016).

There are five steps which applied in Learning Cell technique by the teacher (Hidayah & Rais, 2014). The steps of Learning Cell technique can lead the students to do the process of reading comprehension in analyzing the point of the text. (Kendeou et al., 2016) state that there are five steps of Learning Cell technique. These are the following procedures of Learning Cell technique:

1. The students are asked to individually make some questions and answers dealing with the major points raised in reading assignment.
2. The teacher divides students into pairs or simply ask students to partner with a student sitting nearby and each pair are called by cell in this technique.
3. The students are asked to alternate asking and answering each other's questions based on the questions that has been made individually before. They are asked to discuss.
4. The first student begins by asking the first question and the second student answers the question. The first student offers correction or additional information until a satisfactory answer is achieved.
5. The second student asks the next question and the first student answers,

and the process repeats until all questions have been asked and answered.

By applying the procedures of Learning Cell technique; it is making questions, dividing into a cell, alternate asking and answering the questions, offering correction or information, and repeating until all questions have been asked and answered. It can facilitate the students in reading activity to analyze the point of the text (Hidayah & Rais, 2014).

RESEARCH METHODOLOGY

In conducting this research, the researcher used quantitative approach. The method of the research was Pre-Experimental method with One Group Pretest - Posttest design. Reading test was used as Pre-test and Post-test in this research. The aim of pre-test was to know the students' background knowledge in reading comprehension of explanation text. After knowing the result of pre-test, the researcher gave the treatment. Meanwhile, a post-test is provided to measure the effect of learning cell technique on students' achievement in reading comprehension. The design of this research can be represented as follow (Sugiyono, 2013):

Class	Pre-test	Treatment	Post-test
Experimental Group	O1	X	O2

Notes:

O1 : Pre-test

X : Treatment

O2 : Post-test

In the one group pre-test and post-test design, the researcher used one class as a sample. There were three steps in this design. First, the students were given pre-test (O1). The pre-test was used to identify background knowledge of the students' reading comprehension (Madani, 2016). Afterward, the researcher gave treatment (X) in teaching reading by using Learning Cell technique. At the end of teaching learning process, the students were given post-test (O2).

The population of this research were all students of the eleventh grade in *SMA Yadika 7 Bogor*. The total of the students is 56 students who are divided into two classes. Each class consists of 27 and 29 students. Sample refers to a subgroup of the target population. To take the sample, the researcher used a random

sampling technique to determine the class which can be the sample She took one class by using lottery system, because it was the suggested system to get the sample in a small quantity. Then, the result from random sampling technique was XI IPA class that consists of 29 students as the sample.

The writer used reading test to collect the data and to prove the effect of Learning Cell technique to eleventh grade of *SMA YADIKA 7 Bogor* on their reading comprehension on explanation text. In the test, there were 15 questions about the information related to explanation text. It was used to know students' reading comprehension.

In conducting this research, there were three steps in collecting the data. First, the researcher administered pre-test to the sample to know their reading comprehension. The students answered 15 questions based on the information of explanation text that had prepared. The questions were given at the first meeting when the researcher conducted this study. Second, she gave treatment in three meetings by using Learning Cell technique. Third, the students were administered the posttest. For taking the data analysis, the t-test was used to analyze data of pre-test and post-test result. Calculating t-test is used to know whether there is the different average or not from the sample.

DISCUSSION

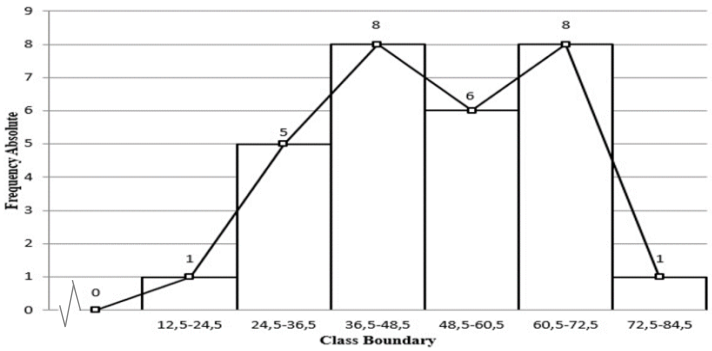
In conducting the research, reading test was given to the students. They were given reading test twice: before the treatments (pre-test) and after the treatments (posttest). Students were given pretest to measure the students' background knowledge in reading comprehension of explanation text. After knowing the result of pre-test, the researcher gave the treatments three times by using learning cell technique as medium in learning explanation text that is used by the researcher. Meanwhile, a post-test is provided to measure the effect of learning cell technique on students' achievement in reading comprehension.

The pre-test was given before giving the treatments to know the students' ability to comprehend text in reading comprehension. In the pretest, students answered 15 questions of explanation text in the form of multiple-choice.

Therefore, the histogram and polygon graph of pre-test scores can be seen in figure 4.1.

Figure 4.1

Histogram and Polygon Graph of Pre-test Scores



Based on the figure 4.1, the data of pre test shows that the highest bar with most of the students' score is in range 36.5-48.5 and 60.6-72.5, meanwhile, the lowest bar shows less of the students' score in range 12.5-24.5 and 72.5-84.5. This figure shows that most of the students scored less 70 which is under the exception criteria, and also shows the background knowledge of the students before they receive the treatment. Because of that, they need series of treatments to improve their reading comprehension.

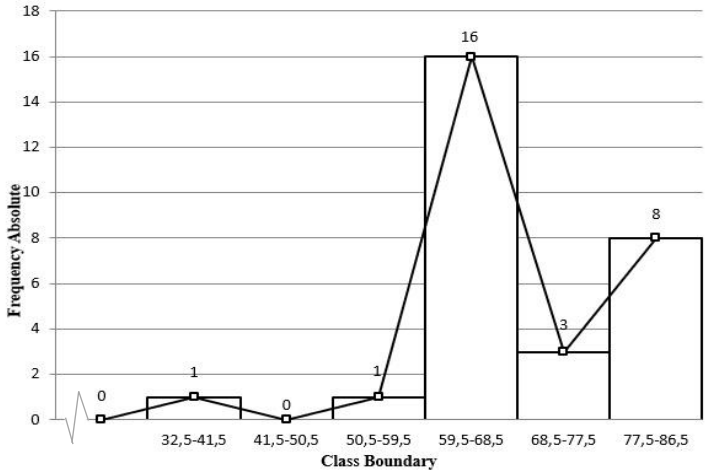
During the treatments, Barkley, et al. (2005: 141) state that there are five steps of Learning Cell technique. The first step is the students were asked to individually make some questions and answers dealing with the major points raised in explanation text. After that the teacher divided students into pairs randomly and each pair were called by cell in this technique. Then the students were asked to alternate asking and answering each other's questions based on the questions that had been made individually before. The first student began by asking the first question and the second student answered the question. The first student offered correction or additional information until a satisfactory answer was achieved. The last step is the second student asked the next question and the first student answered, and the process repeated until all questions had been asked and answered. There was different topic of explanation text that was given for each treatment. There were questions for every explanation text that they have read.

These questions were helpful to build students comprehending of the text.

After giving three treatments by using Learning Cell technique with the topic used in the treatments was about natural phenomenon beyond human's life, the students were given the post-test (Paris & Stahl, 2005). In the post-test students answered 15 questions of explanation text in the form of multiple-choice. The histogram graph of the post-test score can be seen in the figure below.

Figure 4.2

Histogram Graph of Post-test Result



Based on the figure 1.2, the data of posttest shows that the highest bar is in the range of 59,5-68,5 which consists of sixteen students. Meanwhile, there is two students who got the lowest bar in the range of 32,5-41,5 and 50,5-59,5. Based on the result above, it can be concluded that Learning Cell technique is taking part in affecting students' reading comprehension.

In this research, the data were obtained by giving two tests. First, pre-test was given before treatment. The last, post-test was given after treatment. In the pre-test and post-test students answered 15 questions of explanation text in the form of multiple-choice. The test only focused on finding the main idea, specific information, and analyzing vocabulary (Paris & Stahl, 2005). The following table below shows the result of pre-test and post-test scores.

Based on the calculation of the data, the mean of difference is 18.9, and the total of deviation of difference is 8087.2. Moreover, t-test value is 6.09. Meanwhile, t-table value is 2.048 at significant level 0.05 with the degree of freedom (df) is 28. In this case, the t-test value is higher than the t-table value (6.09>2.048). Sugiyono (2015:258) states that if the t-test value is smaller than the

value of t-table, the null hypothesis (Ho) is rejected. Meanwhile, if the t-test value is higher than the value of t-table, the alternative hypothesis (Ha) is accepted. Because of that, it can be concluded that in this research the t-test value is higher than the value of t-table so, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected.

CONCLUSION AND SUGGESTION

After conducting this research and calculating the data, it is concluded that Learning Cell technique affects students' reading comprehension (Wigfield et al., 2016). It is supported by the result of t-test value which is higher than t-table. The t-test value is 6.09, with the value of degree of freedom (*df*) is 28, and t-table value significant level of 0.05 is 2.048. The value of t-test is higher than t-table (6.09 > 2.048). Therefore, the alternative hypothesis *(Ha)* is accepted and the null hypothesis *(Ho)* is rejected. It means that the use learning cell technique has significant effect on students reading comprehension.

Based on the research finding and the t-test value which is higher than the t-table (6.09 > 2.048), it can be concluded that learning cell technique affects the students' reading comprehension. Therefore, the writer would like to provide recommendation for the teacher and further researcher. The other researchers are recommended to do a study related to the use of learning cell in teaching other language skill.

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