EFFECT OF HERRINGBONE TECHNIQUE ON STUDENTS’ READING COMPREHENSION IN NARRATIVE TEXT

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ABSTRACT

The research aimed to find out the effect of Herringbone Technique on students’ reading comprehension at grade eight of SMP Negeri 7 Pematangsiantar. There are also several main theories used to support this research, namely; Brassel and Rasinski (2008), Cahyono et. al. (2011), Deegan (2006), Pang et. al. (2003), Patel and Jain (2008), Richards and Renandya (2002), Sweet and Snow (2003). This research was designed as a quantitative method with quasi-experimental research design. Eight students’of 4 and 5 were selected as the participants. The experimental class was treated using Herringbone Technique while the control class was not treated using Herringbone Technique. The data were obtained through pre-test, treatment, and post-test. The pre-test was held to know the students’ basic ability or score before treatment was given. Meanwhile, the post test was held to know the students’ achievement and significant effect after the students’ were taught using Herringbone Technique. The data shows that the difference or the improvement as the whole students’ got in post test from control to experimental group is 345 or 11.5 point in average. The score of t-test (7,17) is higher than t-table (1.67) at the level of significance 5% for two tailed test, so Alternative Hypothesis is accepted and Null Hypothesis is rejected. Finally, by knowing the result, it is better if English teachers apply Herringbone Technique to improve the students’ achievement on reading comprehension.

Keywords: Effect, herringbone, narrative, reading comprehension,

I. INTRODUCTION

Language is an important means of communication which used in the world. In Oxford Learner's Dictionary, language is a system of communication in speech and writing used by people of a particular country. It plays an important
role in our life. English as the foreign language in our country is considered to be important to be learned and used to develop science, technology, art and culture.

Teaching English language involves four aspects, they are speaking, listening, reading and writing. One of aspect that have to be mastered is reading, as an Indonesia’s aphorism “Language is key to open window of world”. In Indonesia, many information including scientific books are written in English. Therefore, reading skill is essential for students. Beside that to master other skills of English, the first way is reading because to learn speaking, writing or listening certainly we will face with written language (Manullang et. al., 2022). As a result, it demands the students to understand the written language better than another form of language.

The ability to read is universally recognized as the most important basic academic skill. Reading opens up the pathways to learning across the curriculum, and any child who cannot read is most seriously disadvantaged. Because to study anything firstly they must be able to read, by reading they will obtain many knowledge that useful in their future.

As one of the four skills, reading plays an important role in learning process because it gives knowledge, information, and idea to be applied in the speaking and writing (Damanik and Herman, 2021). Through reading, students can learn ideas, concepts, and attitudes. Patel and Jain (2008:113) also say, “Reading is most useful and important skill for people”. Pang et.al (2003:6) also say, “It enables us to gain new knowledge, enjoy literature and do every day thing that are part of modern life, such as, reading newspaper, job listing, instruction manuals maps and so on”. Then, by reading, students can get many vocabularies that they need to be applied in speaking and writing. Additionally, reading skill is used in the final examination because almost 75% students will face with comprehension task. So the students must have a good reading comprehension if they want to pass the exams and graduate from the school. Based on statements above, reading text is very important to do, because by reading people can improve knowledge and get information.

Sweet and Snow (2003:8) define reading comprehension is the process of extracting and constructing meaning from the text which involves three interactive elements; the reader, the text and the context (Silalahi et. al., 2022). It means that reading comprehension is an activity to understand the reading material deeply. A reader should think critically how to understand the text. Furthermore, reading comprehension is an essential part of reading activity. Richards and Renandya (2002:277) state reading for comprehension is the primary purpose for reading. Without comprehension students cannot achieve their academic success without comprehending what they read (Ivantara, Herman and Manalu, 2020). Reading
without comprehension is only a way for the students to arrive at what they want to know from the reading material. That is why reading comprehension is very needed by students.

Based on the researcher experience during the teaching practice program (PPL) at grade VIII students at SMP N 7 Pematangsiantar, the researcher found there were many problems in teaching reading. The students had difficulties in learning reading skill especially in comprehending and understanding the information of the reading narrative text. In addition, the researcher found that there were two main factors that influenced the students’ ability in comprehending reading text. Firstly, the students were lack in vocabulary especially in translating unfamiliar word that is find in reading text, so they found difficulty to understand and found main idea or information that is applied in the text. Secondly, the students were not interested in learning reading, when the teacher told them to tell some informations for their reading text, most of them did not have some ideas or opinions to clarify the information in the reading text. So the process of teaching reading did not run well. This situation happened because the technique that is used was not suitable. The evidence of the problem that occurred when i taught at the school was with the result of the test that there is out of 35 students, 75% of them (around 25 students) got under 60. Based on curriculum in my teaching practice program English Subject had the standard of minimum completeness (KKM) 70. So, the many students got low score. The result, explain that the students are weak to make an easy in English language.

To overcome that problem, Herringbone is a kind of technique used in teaching reading process. It is a reading technique that can be applied to improve reading comprehension. The herringbone technique is a structured outlining procedure designed to help student organize important information in a text. According to Deegan (2006:102) Herringbone Technique is a technique that develops comprehension of the main idea by plotting who, what, when, where, why, and how question on a visual diagram of a fish skeleton (Lumbantobing, Pardede and Herman, 2020). Using the answer to the WH questions, the students write the main idea across the backbone of the fish diagram. This technique is made to improve students’ reading comprehension by organizing important information in a text.

Based on background above, the researcher is interested in conducting a research, entitled: The Effect of Herringbone Technique on Students’ Reading Comprehension at Grade Eight of SMP N 7 Pematangsiantar.

II. RESEARCH METHODOLOGY
A. Research Design

This research is quantitative research. According to Creswell (2009:32), “Quantitative research is a mean for testing objective theories by examining the relationship among variables (Sinaga, Herman and Siahaan, 2020). These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures.

The researcher uses this method to get objective measurement and gather numeric data that are used in answering the question or test determined hyporesearch. Conducting this research, the researcher uses an experimental design which means that there is a certain experimental applied to the population or sample. There are two groups in this study. Experimental group is the group that receives treatment by using herringbone technique while the control group is the group that receives a different treatment or is treated as usual without using herringbone technique. So, the researcher wants to find out effect of herringbone technique on student’s achievement in reading comprehension in narrative text at grade eight junior high school.

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-Test</th>
<th>Treatment</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>X1</td>
<td>X</td>
<td>X2</td>
</tr>
<tr>
<td>Control</td>
<td>Y1</td>
<td>Y</td>
<td>Y2</td>
</tr>
</tbody>
</table>

B. Population and Sample

1. Population

The population of this research is the grade eight students of SMP Negeri 7 Pematangsiantar. The students will be researched consists of two classes where experimental group consists of 30 students, and control group consists of 30 students. According to Ary, Jacob and Sorensen (2010:148), population is defined as all member of any well-defined class of people, events, or object (Herman et. al., 2020). It consists of six classes from 1-6 class (VIII-1, VIII-2, VIII-3, VIII-4, VIII-5, VIII-6). The subject number was shown in the table below:

<table>
<thead>
<tr>
<th>Class</th>
<th>VIII-1</th>
<th>VIII-2</th>
<th>VIII-3</th>
<th>VIII-4</th>
<th>VIII-5</th>
<th>VIII-6</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students</td>
<td>32</td>
<td>32</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>184</td>
</tr>
</tbody>
</table>
2. Sample

Ary, Jacob & Sorensen (2010:148) a sample was portion of a population. There are many types of sample, namely cluster sample, simple random sample, stratified sample, etc. In obtaining the sample, this research used simple random sampling. According to Cohen et al (2007:110), simple random samples was each member of the population, they are each selection is entirely independent of the next (Sirait, Hutauruk and Herman, 2020). The method involves selecting at random from the list of the population the required number of subjects for the sample. In this research the researcher chooses the sample randomly in order to be an experimental group and control class of students at SMP Negeri 7 Pematangsiantar as sample. The researcher chooses VIII-4 and VIII-5. Class VIII-4 consists of 30 students as experimental group and VIII-5 consists of 30 students as the control group.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Experimental class (X)</th>
<th>Control class (Y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Number of students</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

C. Instrument for Collecting the Data

The instrument for collecting the data is reading comprehension test in narrative text, video record use hand phone camera or canon camera. It is multiple choices that consisted of 15 items with 2 passages where the first part has 10 questions and the second part has 5 questions and each item consists of 5 options. The tests were taken from text given by the researcher. The material of the tests was taken from the subject matter which taught to the students.

D. Techniques of Data Collection

In conducting the test, there are three steps applied; doing pre-test, treatment and doing post-test.

1. Pre-test

The function of the pretest is conducted to find out the result and the mean scores of the group which using herringbone technique in experimental class (Class VIII-4) and without using herringbone technique in control class (Class VIII-5) before getting treatment. In doing pre-test, the researcher asks the students in experimental and control class to read a narrative text then answer the questions. The procedure of pre-test is same in experimental class even in control class. This test is used to know the prior of knowledge.
2. Treatment

The experimental class and the control class are taught by using the same material but with different ways. The experimental class is taught by using herringbone technique in teaching narrative text. The control class is taught without using herringbone technique in teaching narrative text. The test is conducted based on stated procedures.

3. Post-test

Having given treatment, the students are given a post test which is similar to pre-test. The function of the post test is to know the mean scores of the experimental and control class after getting treatment. It is also used to know whether there is a different finding in both classes. In this test, the researcher asks the students to answer a reading comprehension test in narrative text.

E. Teaching Procedure in Experimental and Control Group

<table>
<thead>
<tr>
<th></th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Beginning Acts</td>
<td>- Greeting</td>
<td>- Greeting</td>
</tr>
<tr>
<td></td>
<td>- Checking the absent</td>
<td>- Checking the absent</td>
</tr>
<tr>
<td></td>
<td>- Giving some motivation</td>
<td>- Giving some motivation</td>
</tr>
<tr>
<td></td>
<td>- Teacher explains the goal of study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Teacher explains the kind of text</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Teacher gives some key vocabularies or difficult words in the text</td>
<td></td>
</tr>
</tbody>
</table>
### 2. Main Acts

- Teacher divides students into some groups
- In groups, the students read the text
- The students discuss to find out the main idea and supporting ideas
- The students discuss the generic structure and characteristic of narrative text
- Then, the students share their result to their friends

### Control

- The teacher explains the kinds of text
- The teacher explains the communicative purpose of the text
- The teacher explains the generic structure and characteristic of the text
- The teacher reads the text
- The students read the text loudly one by one
- The students find out unfamiliar words
- The students find out the main idea and supporting ideas of the text
- Then, the students read their result

### 3. Closing Acts

- Both of teacher and students do a reflection on what they have just done and then teacher helps students to make their conclusion about the text
- Closing the class

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- Both of teacher and students do a reflection on what they have just done and then teacher helps students to make their conclusion about the text.
- Closing the class

### F. Technique of Data Analysis

After the data has been collected, the pre-test and the post test are analyzed statistically by applying the t-test. In order to know whether there is any effect of using herringbone technique at grade eight students on students’ achievement in reading comprehension in narrative text. The difference of mean score of two classes are calculated by using t-test. The t-test formula was used as follow:

1. Determining Mean of experimental group

\[ M_x = \frac{\sum X}{N} \]
2. Determining Mean of control group
\[ M_y = \frac{\sum Y}{N} \]

3. Determining t-test \((t_0)\) with formula
\[
t = \frac{M_x - M_y}{\sqrt{\frac{d_x^2}{N_x} + \frac{d_y^2}{N_y}}} \sqrt{\left| N_x + N_y - 2 \right| \left( \frac{1}{N_x} + \frac{1}{N_y} \right)}
\]

Note:
- \(M_x\) = Mean of experimental group
- \(M_y\) = Mean of control group
- \(d_x\) = The standard deviation of experimental group
- \(d_y\) = The standard deviation of control group
- \(N_x\) = Total sample of experimental group
- \(N_y\) = Total sample of control group

### III. FINDING AND DISCUSSION

#### A. Finding
Research finding was the conclusion of the research result with data shown. After the researcher treated the data and verified the hypothesis. Then the researcher came to the research finding. The researcher found that there was the effect of Herringbone Technique on students’ reading comprehension at grade eight SMP N 7 Pematangsiantar. It was showed from the score of the students’ by using multiple choices test than the pre-test and post-test it shown significantly. It means than the score changed. The mean of experimental class 71.7 and the mean of control class was 60.2. It was show an effect the score of the students’ in experimental class was higher than control class. From the analysis of the data, t-observed was higher than t-table \((7.17 > 1.67)\). It means that Alternative Hypothesis is accepted and Null Hypothesis is rejected.

#### B. Discussion
To know the effect of Herringbone Technique to the students’ achievement in teaching reading, the researcher gave them pre-test and post-test in reading. After the post-test was administered, the researcher got the data in the form of pre-test and post-test score. Then, the data is analyzed by using t-test. The
score of students reading in post-test from 30 students with applying Herringbone Technique are higher ($\sum x_2=2151$) with the total mean 71.7 can be said good enough than the score of pre-test without applying Herringbone Technique ($\sum y_2=1806$) with the total mean 60.2 is average. At a glance, the mean from pre-test and post-test can be seen that students reading comprehension improved.

In experimental class, there was changing. Every students have a good response when teaching learning process happened, they more active but make the classroom atmosphere more noisy when doing the task, because they busy to ask the partner to find the right answer, also the students more inovative to find out the words of narrative text used Herringbone Technique. It can be seen as effect of Herringbone Technique which gave effect to the students ability in reading comprehension. Then, to know the significance different score between pre-test and post-test, the researcher analyzed the data using t-test, the result of t-test is 7.17. The value of t-count has been found, and then the researcher considered the degree of freedom or df= N – 2 so, the df is 30 + 30 – 2 = 58. The researcher consulted to t-table, at the significance level of 5%. The researcher found the df (58) in t-table at significance level 5% that is (1.67). To answer the hypothesis testing, the researcher compared the value of t-test and t-table. The value of t-test that is gotten by the researcher is (t-test = 7.17) and the value of t-table is (1.67). It is known that t-count is higher than t-table. Since, the t-test is bigger than t-table, the Accepted Hypothesis (Ha) is accepted and the Null Hypothesis (Ho) is rejected, the theory is verified. It means that there is different reading score of grade eighth students of SMP N 7 Pematangsiantar between before and after taught using Herringbone Technique.

Finally, the researcher found the answer of then problem namely to know the significant of using Herringbone Technique by analyzing the data. It was proved by the students average score in experimental class (71.7) and in control class (60.2). The researcher found t-observed > t-table namely 7.17 > 1.67 which made (Ha) is accepted. If t-test is higher than t-table, it means that there is significant effect of using Herringbone Technique and t-test > t-table because the researcher using Herringbone Technique. By using Herringbone Technique, the students can find and to solve the problem from their lesson and help the researcher in explaining the material to the students clearly, it can increase students motivation in studying. So, the students can be active and fun in reading comprehension. And while in control class, the students were difficult to find and solve the problem because the researcher did not use Herringbone Technique, so the students can be bored and lazy in reading.

IV. CONCLUSION
After conducting the research and collecting the data of the research from grade eighth students of SMP N 7 Pematangsiantar, finally the researcher concluded that Herringbone Technique significantly affect the students’ reading comprehension where t-test is higher than t-table (7.17 > 1.67). Teaching Reading Comprehension by applying Herringbone Technique is more effective than using conventional teaching technique. It is proven based on the mean of experimental group is higher than control group (71,7 > 60,2). The students were more interested in reading comprehension by applying Herringbone Technique because they could discuss and share the problems which found in the reading comprehension text with their friends.

The researcher expects that this research may give contribution to other researchers who are interested in conducting the similar and related research. The researchers realizes that this research is far from being perfect so that other researchers may add other related theories upon this research in other greater populations and areas. It is suggested to other researchers to conduct the similar research at the schools within remote areas or schools with lack of facilities to support the teaching and learning process. It takes into consideration some other factors that influence students’ reading comprehension ability as well.

REFERENCES


