The Effectiveness of Using Herringbone Technique Towards Student's Reading Comprehension Skill at SMP Negeri 1 Pandeglang

Mia Agustina, Nurhaeda Gailea, Ika Handayani

miaagustyn98@gmail.com
Universitas Sultan Ageng Tirtayasa, Serang, Indonesia
nurhaedah@untirta.ac.id
Universitas Sultan Ageng Tirtayasa, Serang, Indonesia
Ika.handayani@untirta.ac.id

Abstract: The objective of this research is to know whether there is any effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at SMP Negeri 1 Pandeglang. The samples of this research were eighth grade of SMPN 1 Pandeglang. They were VIII B as experimental Class and VIII A as control class. Each class consisted of 30 students. This research used quantitative approach through quasi-experimental as a research design. The researcher collected the data through pre-test and post-test. The instrument of this research was a reading comprehension test. As the result of hyphothesis testing, the value of t_{table} is 2,00172 and t_{count} is 12,866. $t_{count} \geq t_{table}$ or $12,866 \geq 2,00172$. at degree of freedom $df = 58$ with the level of significance 0.05 (5%). It can be concluded that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. So, there is effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at the eighth grade of SMPN 1 Pandeglang.

Keywords: *Herringbone Technique, Reading Comprehension Skill, Recount Text*

Introduction

There are four language skills in learning English, namely listening, speaking, reading and writing. One of the language skills that must be learned and mastered by students is reading skill. Through reading students can find information from a variety of the texts and develop their knowledge and essential skill for independent learning. In order to achieve the goal, the comprehension ability in reading is needed.

Reading is a process of receiving and interpreting information encoded in language from via the medium of print (Grabe, 2009). It means that someone will be able to receive information and interpret the meaning of a text after going through the reading process. According to Jhonson (2008), comprehension is the most effective process for understanding a text. It is an active process to be able to understand the meaning and get the required information from a text in as effectively as possible.

Based on free interview with English teacher at SMPN 1 Pandeglang, the researcher found the students' problem in learning reading comprehension. First, many students do not understand the content of English text and had difficulties in finding the main idea and supporting details. Second, many students lack vocabulary so that they have difficulty to comprehend the contents of a text.

The researcher sees reading comprehension as a skill of language that needs to be controlled properly. There are so many ways that can be applied by the teacher in the EFL classroom to develop students reading comprehension. The use of methods, techniques or even the models of learning can be an alternative way to help students to be success in comprehending the text. In this case, the researcher used herringbone as a technique in teaching learning.

Several studies have shown the effectiveness of herringbone techniques for teaching reading. A study conducted by Yusuf (2016) revealed that the students' responded toward the implementation of herringbone technique was very good, gave possitive effect and helped them more easily in understanding the text. Another study conducted by Ardayati (2020) showed that there was effectiveness to teach reading comprehension by using herringbone technique to the eighth-grade students of SMPN 11 Lubuklinggau. The previous study conducted by pre-experimental method, meanwhile this research conducted by quasi experimental method.

In line with the statement above, the researcher proposed herringbone technique as one of the effective techniques that teachers can used in teaching reading comprehension especially recount text. According to Thaler (2008), the herringbone technique is a useful technique for analyzing a text. The herringbone technique consists of a short graphic organizer resembling a fish skeleton. This technique is believed to be able to help English learners in finding the main idea and other important information in a text. Therefore, herringbone technique is that can be used to improve students' reading comprehension.

From these success accounts, the researchers of this study then decided to apply Herringbone Technique to their students under study by formulating the following specific research questions: "Is there any effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at SMP Negeri 1 Pandeglang?".

Based on the research questions above, the following hypotheses are proffered:

Alternative Hypothesis (Ha) : There is effectiveness of using herringbone technique towards students' reading comprehension skill.

Null Hypothesis (Ho): There is no effectiveness of using herringbone technique towards students' reading comprehension skill.

Literature Review

Snow, (2002) states that reading comprehension is a process for extracting and constructing meaning through interaction with written language. Furthermore, in this process readers can use their experience or previous knowledge about the topic, text structure, and language structure used to understand the message conveyed by the author (Lenz, 2005).

In the reading process there is a dynamic interaction between the reader and the text when he or she tries to find and get the meaning of the text. Furthermore, Patel (2008) stated that reading is not the only source of information, but rather an active process consisting of recognition and understanding

skills. In addition, learning reading comprehension is an important activity to increase one's knowledge and skills about language. In conclusion, reading comprehension is very important to learn, especially for students. Because if a student has the ability to read and understand well, it will affect their academic ability and other general language skills such as listening, writing, and speaking.

In teaching reading comprehension, especially for junior high school, there many kinds of text that had to comprehended. One of them is recount text. Recount text is a text that tells back about events, experiences, situations or actions that have been carried out by someone in the past. According to Watkins, (2005), recount text functions as a text that tells an event in the past. Recount text refers to a text that retells chronologically events that have occurred in the past and is usually in accordance with the author's personal experience (Emilia, 2010). The generic structure is: orientation, event, and re-orientation.

Furthermore, in teaching language skills, special techniques are needed to be able to achieve learning objectives. One of the various techniques commonly used in the learning process of reading comprehension is graphic organizer. According to Mcknight (2010) graphic organizers are educational tools that are important and effective in organizing ideas and can facilitate students' understanding of newly acquired information. The use of a graphic organizer can help students retrieve detailed information about what they have learned so that it will be easier to understand.

Herringbone technique is one part of the graphic organizer. According to Thaler (2008), the herringbone technique is a useful technique for analyzing a text. The herringbone technique consists of a short graphic organizer resembling a fish skeleton. This technique is believed to be able to help English learners in finding the main idea and other important information in a text. In line with this statement, (Deegan, 2006) states that the herringbone technique develops understanding of the main idea by plotting the who, what, when, where, how, and why questions on a visual fish skeleton diagram. The use of herringbone technique can help students to classify and organize information that refers to supporting details and main ideas in a text.

The form of Herringbone Technique that is used in this research adapted from (Mcknight, 2010). McKnight's form of Herringbone Technique consists of single box that used for stating main idea and lines are used to put the supporting or specific information. In this study, the researcher decides to put some boxes in each line for stating general and specific information. Boxes make the information written neat and well-organized.
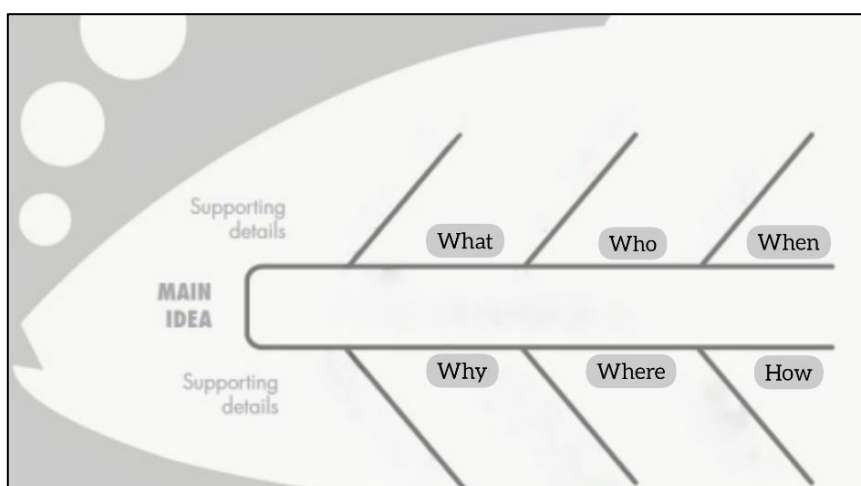
(Adapted from McKnight, 2010)

Research Method

The researcher used quantitative method. According to Creswell (2014) Quantitative research is an approach for testing objective theories by examining the relationship among variables. The investigator relies on statistical analysis (mathematical analysis) of the data, which is typically in numeric form.

The researcher used the experimental design. Experimental is the best of the quantitative design to use establish probable cause and effect (Creswell, 2014). Furthermore, kind of the experimental design used quasi-experimental as the research of this study. According to Hatch & Farhady (1982) Quasi experimental is the ultimate goal of any investigation is to conduct research that will allow us to the relationship between the variables we have selected. The researcher used quasi experimental because it is in the natural setting but variables are isolated, controlled, and manipulated.

In this study, the experimental was conducted in two groups. The experimental class which used herringbone technique and the control class by traditional technique. In this study, the data used pre-test and post-test in order to know whether there is any effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at SMP Negeri 1 Pandeglang.

Furthermore, the population of this study was the eighth-grade students of SMPN 1 Pandeglang. It consists of eighth classes (VIII-A up to VIII-H), the total number of students was 240 sudents. They are equally divided in two groups. Sample was taken cluster sampling. There were two classes, VIII A and VIII B that are choosen as sample. Class VIII A was control class and VIII B was experimental class.So, the sample total is 60 students. The sample total was 30 students of control Class and 30 students of experimental class.

Research Instrument

The researchers will use the test as an instrument. There are two kinds of test use to get the data through multiple choice questions.

1) Pre-test
2) At the first meeting, the researchers gave a pre-test to the students. It was conducted to know the students score in reading. This test was given in order to know how far the student's ability in

reading comprehension of recount text. The pre-test comprised of 20 items, in the form of multiple choices items.

3)

4)

5) Post-test

6) Post-test was to measure students' ability after treatment process, this test was given to know the basic competence for the students and to know their earlier knowledge after they get treatment. A post-test was given in order to know the scores of the students after they had treatment of herringbone technique in their reading comprehension of recount text. This test was used to measure the students' achievement after they were given treatment. The post-test comprised of 20 items, in the form of multiple choices items.

Data Analysis technique

Data obtained through test (pre-test and post-test) will analyzed using several techniques as follows:

Normality Test

A normality test is a statistical process used to determine if a sample or any group of data fits a standard normal distribution. A normality test can be performed mathematically or graphically. To determine the normality test, the researcher was finding out the result from Kolmogrov-sminorv test researcher SPSS Program version 23.

If sig value of the Kolmogrov-sminorv test is greater than 0.05, the data is normal and if it is below 0.05, the data significantly deviate from a normal distributed. The steps as follows:

1) Setting the null hypothesis (Ho)

2) Setting the level of significance at 0.05

3) Computing the normality distribution by using One-Sample Kolmogorov-Smirnov Test.

4) Computing the asymptotic significance/probability (p) with the level of significance (0.05), the null hypothesis is accepted which means the score of both classes are normally distributed. In contrast, if asymptotic significance (0.05), the null hypothesis is rejected which means that the scores of both classes are not normally distributed.

Besides that, there are some steps to change the data into the graphic of normal distribution:

1. Find the highest score and the lowest score, then calculate the range (R)

2. Calculate the sum of classes (BK) with the form as follow:

7) BK = 1 + 3.3 log N

8) Note:

9) N = sum of the students

3. Calculate the interval of class (I) with the form as follow:

10) $I = \frac{R}{BK}$

4. Make the table of distribution data frequency of pre-test and post-test

5. After making the table then draw the graphics of normal distribution to input the data.

Homogeneity Test

Homogeneity is used to describe a set of data that has the same variance. To know whether experiment class and control class that are taken from population have same or not. In this study, the researcher used Levene's test to measure the homogeneity of variance. The steps are as follow:

1) Stating the hypothesis and setting the alpha level. The alpha level set is at 0.05 and the hypothesis are as follows:

11) H_o = The variance of the control and experimental group are homogeneous.

12) H_a = The variances of both groups are not homogeneous.

2) Analyzing the score using Levene's test through SPSS Program version 23.

3) Interpreting the output data by this way: if the result of the test is interpreted to be significance ($p < 0.05$) it means that the null hypothesis is rejected and the variances are significantly difference. In contrast, if the result is interpreted to be no significant ($p > 0.05$) then, it can be concluded that the null hypothesis is accepted and variances are approximately equal.

Besides that, if the homogeneity test was calculated by using f count, the formula as follows:

$$F_{count} = \frac{BV}{SV}$$

Notes:

F_{count} = f value variant

BV   = The biggest variant

SV   = The smallest variant

The criteria as follows:

If $F_{count} \geq F_{table}$ = It indicates that the test is homogenous

If $F_{count} \leq F_{table}$ = It indicates that the test is not homogenous

Hyphothesis Test

Hypothesis testing is a procedure for making decisions about results by comparing an observed value of a sample with a population value to determine if no difference or relationship exists between the values. In this study, the researcher was presented the alternative hypothesis (H_a) and the null hypothesis (H_o) which are formulated as follows:

H$_a$ = X1 ≠ X2

H$_o$ = X1 = X2

Notes:

13) Alternative Hypothesis (H$_a$)

14) There is effectiveness of using herringbone technique towards students' reading comprehension skill.

15) Null Hypothesis (H$_o$)

16) There is no effectiveness of using herringbone technique towards students' reading comprehension skill.

T -test

T-test is probably the most widely used statistical test for the comparison of two means because it can be used with very small sample size (Hatch & Farhady, 1982).

T-test used to find out whether the null hypothesis is rejected or accepted. If the null hypothesis is rejected, it means that there is difference between experimental and control class after implementing by using peer response strategy. The purpose of t-test was to compare whether there was significance difference between experimental group and control croup. The researcher analyzed the research of the test by using t-test formula. The researcher analyzed this research of the test by using t-test formula. The formula as follow:

1) First

17) $Md = \frac{\sum d}{N}$

2) Second

18) $\sum x^2 d = \sum d^2 - \frac{(\sum d)_2}{N}$

19)

20)

21)

22)

23)

24)

3) Third

25) $t = \frac{Md}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}}$

26) Notes:

27) Md = Mean from the differences between pre-test and post-test.

28) Xd = Deviation of each

29) $\sum x^2$d = Sum of deviation quadrate

30)   N   = Subject at the sample

31)   d.b   = N-1

32)   (Arikunto, 2010)

33)

34) Then the researcher compared t-$_{test}$ to the t-$_{table}$ on 0.05 or 5% level of significant ($df = N_X + N_Y - 2$).

35)   The criteria of significant values as follows:

36)   If $t_{test} > t_{table}$: it indicates that alternative hypothesis was accepted.

37) If $t_{test} < t_{table}$: it indicates that alternative hypothesis was rejected and null hypothesis was accepted.

38)

Result and Discussion

This research attempted to know whether there was any effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at SMPN 1 Pandeglang.

The study was conducted at SMP Negeri 1 Pandeglang in academic year 2021/2022 with the student at the eighth grade as the population. The subject of the study was divided into two classes that chosen by cluster sampling technique. There were two classes, Experimental Class and Control Class that are chosen for this sample after applied cluster sampling. The sample total was 30 students of experimental class and 30 students of control class. So, the total sample is 60 students.

The researcher used test for collecting data. The researcher collected the data from the students' score of pre-test and post-test. The researcher had given students pre-test to know the students' reading ability before the researcher gave the treatment. Researcher gave post-test to the students after the researcher had given treatment. Then, the result of pre-test and post-test were compared by the researcher.

After collecting the data, the researcher calculated and analyzed them. The data were in quantitative form. The result of the test can be seen in the following table:

Table 1

The percentage of Students' Progress in Reading Comprehension

Class	Total of Pre Test	Total of Post Test	Mean of Pre Test	Mean of Post test
C	1945	2420	64,83	80,67
E	1900	2480	63,33	82,67

Based on the results, the total score of the pre-test from the control class was 1945 with the average 64,83. Then there was an improvement in the post test of control class with the total score of post-tests was 2420 and the average was 80,67. The improvement in the average score between

the pre-test and p-st test in the control class was 24%. In the other hand the total score of pre-test from the experimental class was 1900 with the average was 63,33. There was also an improvement in the post test score from experimental class with the total score was 2480 and the average 82,67. The improvement in the average score between the pre-test and post-test in the experimental class was 31%. It means that the improvement of the average score in the experimental class is higher than the average score in the control class or 31% ≥24%.

From the data above, it can be seen that Alternative Hypothesis (Ha) was accepted. It means that there was effectiveness of using herringbone technique towards students' reading comprehension skill.

Conclusion and Suggestion

Conclusion

In the previous chapter, the researcher analyzed the data statistically. Based on the statistical analysis, the researcher concluded that there is effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at the eighth grade of SMPN 1 Pandeglang.

From the hypothesis testing the result showed that the value t_{table} was 2,00172 and t_{count} was 12,866. $t_{count} \geq t_{table}$ or $12,866 \geq 2,00172$. at degree of freedom $df = 58$ with the level of significance 0.05 (5%). It can be concluded that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. It means that there is effectiveness of using herringbone technique towards students' reading comprehension skill on recount text at the eighth grade of SMPN 1 Pandeglang.

Suggestion

Based on the result of the research, the researcher would like to give some suggestions, as follow:
Suggestion for the teacher:
1. The teachers have to know many readings comprehension technique, it is important for the teacher to improve reading skills in teaching learning process.
2. Learning reading is not simple and it needs more attention from the teacher and the students.
3. The teachers should develop material and good method and technique in teaching English.
Suggestion for the students:
1. The students need to do more reading activity and also attend the teacher's explanation and do the instructions.
2. The students need to realize that learning is two-way process, not only teacher-centered. It means that they play a significant role in achieving their success in study.
3. The students need to practice more their English skill especially their reading and keep practicing in English.

Suggestion for the next researcher:

For the other researchers, they can develop and continue their own research dealing with herringbone technique that can use with other language skill such as writing, listening, or speaking. Furthemore, other researcher can use other methode such as true experimental or pre-experimental design.

References

Arikunto, S. (2010). *Prosedur Penelitian* (P. R. Cipta (ed.)).

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* (4th ed.). SAGE.

Deegan, J. (2006). Herringbone Technique. *Online at Http://Www. Teacherweb. Com/PA/Nazareth Area Middle School/The Specialist Team/Herringbone Technique.*

Emilia, E. (2010). *Teaching Writing Developing Critical Learners*. Rizki Press.
Grabe, W. (2009). *Reading in a Second Language Moving from Theory to Practice*. Cambridge University Press.

Hatch, E., & Farhady, H. (1982). *Research design and statistics for applied linguistics.*

Jhonson, K. (2008). *An Introduction to Foreign Language Learning and Teaching*. Pearson Longman.

Knapp, Peter and Watkins, M. (2005). *Genre, Text, Grammar: Technologies for Teaching and Assessing Writing*. Everbest Printing.

Lenz, K. (2005). An introduction to reading comprehension. *Available Website: Http://Www. Specialconnections. Ku. Edu*.

Mcknight, katherine S. (2010). *Teacher's Big Book of Graphic Organizer:100 Reproducible Organizers That Help Kids with Reading, Writing, and the Content Areas*. Jossey-Bass.

Patel, M. . (2008). *English Language Teaching (Methods, Tools, and Technique)*. Sunrise.

Snow, C. (2002). *Reading for Understanding Toward an R&D Program in Reading Comprehension*. RAND Corporation.

Thaler, E. (2008). *Teaching English Literature*. utb GmbH.