THE EFFECTIVENESS OF HERRINGBONE TECHNIQUE ON STUDENTS READING NARRATIVE TEXT AT THE TENTH-GRADE STUDENTS OF SMAN 1 KOTA MOJOKERTO

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Abstrak. Penelitian ini dilakukan untuk mengukur keefektifan teknik herringbone pada siswa membaca teks naratif pada siswa kelas sepuluh SMAN 1 Kota Mojokerto . Penelitian ini menggunakan desain penelitian kuantitatif dengan desain quasi eksperimen post-test only design. Subjek penelitian ini dipilih dari sepuluh kelas siswa kelas X SMAN 1 Kota Mojokerto. Peneliti melakukan teknik cluster random sampling untuk mendapatkan subjek penelitian. Akhirnya peneliti mendapatkan X-IPA 5 sebagai kelas eksperimen yang akan diajar dengan teknik herringbone dan X-IPA 4 sebagai kelas kontrol yang akan diajar dengan teknik non herringbone. Di akhir setiap perlakuan, peneliti memberikan post-test kepada kedua kelompok yang terdiri dari 50 soal pilihan ganda pemahaman teks naratif untuk memperoleh data. Setelah data terkumpul, peneliti menganalisis data menggunakan rumus statistik independent t-test yang akan menyajikan perbedaan skor siswa dalam pembelajaran membaca menggunakan teknik herringbone dan tanpa teknik herringbone. Berdasarkan hasil perhitungan diperoleh nilai t hitung > t tabel yaitu 4,833 > 1,669 dengan taraf signifikan 5%. Artinya Hipotesis Null (Ho) ditolak dan Hipotesis Alternatif (Ha) diterima. Dapat dikatakan bahwa ada perbedaan yang signifikan antara siswa yang diajar menggunakan teknik herringbone dan yang tidak. Kesimpulannya, teknik herringbone adalah teknik yang efektif untuk mengajar membaca teks naratif pada siswa kelas sepuluh SMAN 1 Kota Mojokerto .
Kata Kunci: efektivitas, teknik herringbone, membaca teks narasi

Abstract. This research was done to measure the effectiveness of herringbone technique on students reading narrative text at the tenth-grade students of SMAN 1 Kota Mojokerto. This research used quantitative research design specifically quasi experimental post-test only design. The subject of this research was chosen from ten classes of the tenth grade in SMAN 1 Kota Mojokerto in academic year of 2018/2019. The researcher did cluster random sampling technique to gain the research subjects. Finally, the researcher got X-IPA 5 as the experimental class that would be taught by using herringbone technique and X-IPA 4 as the control class that would be taught using non herringbone technique. In the end of each treatment, the researcher gave post-test to both of groups that consisted of 50 multiple choice questions of narrative text comprehension to attain the data. After the data collected, the researcher analyzed the data using statistical formula of independent t-test that would present the difference between students' score in learning reading using herringbone technique and without herringbone technique. Based on the calculation result, the researcher found that the $t_{value} > t_{table}$ that is 4, 833 > 1,669 with the significant level 5 %. It meant that the Null Hypothesis (Ho) was rejected, and the Alternative Hypothesis (Ha) was accepted. It can be said that there is significant difference between the students taught using herringbone technique and those not. In conclusion, the herringbone technique is an effective technique for teaching reading narrative text at the tenth-grade students of SMAN 1 Kota Mojokerto.
Keywords: effectiveness, herringbone technique, reading narrative text.

INTRODUCTION

English is considered as a foreign language in Indonesia in which it requires four certain major language skills that should be mastered by a language learner. Those are listening, speaking, reading, and writing skills. Listening and reading skills are regarded as receptive skills while speaking and writing skills are productive skills. As one of the language skills, reading plays an important role because reading has become a part of our daily life. Through reading various printed materials such as newspapers, magazines, fiction, and nonfiction books, we can gain a lot of knowledge, information, pleasure and problem solutions. That is why the ability to read the texts in any form will contribute a great advantage in our life such as gaining success at school.

Teaching strategies also play an important role in achieving better reading skills because teaching strategies is one of the most effective means of helping students to overcome reading problems. But sometimes, "the teachers just assign the reading materials, have the students read, and then assess their reading comprehension performance" (Dorkchandra, 2010: 2). The poor teaching method like this can lead to students' failure in reading

comprehension. Students need strategies in reading so that they can comprehend a text properly. "Strategies will provide the means to tackle complex problems in more efficient ways and, with practice, the strategies lead to skills that become automatic and quick over time" (McNamara, 2009: 34).

There are some advantages of using herringbone technique. Herringbone technique helps students to become more active in the class and it also makes students enthusiastic in reading. Then, "the students also can identify general and specific information, and also comprehend the reading text easily and accurately by applying herringbone technique" (Handayani, Tasnim & Santihastuti, 2016: 535). Beside useful for students, herringbone technique is also useful for teachers in teaching the learning process to be fun and creative. Herringbone technique also proved to be effective in enhancing the students' reading skills through many research that have been expanded (Handayani et al, 2016 ; Kurniawan & Indrawati, 2016 ; Nurqomariyah, 2015 ; Rahila & Sakdiah, 2016 ; Solichah, 2013). It can be concluded that herringbone technique is one of reliable techniques that can increase the students' reading skills. According to Deegan (2006), "this technique is particularly well suited for expository text but can also be used with narrative text". Narrative text is one of the text types learned by students in every education level, starting from junior high school, senior high school until university. The purpose of narrative text is to entertain the reader about the story or events. Considering the above explanation, the researcher intended to conduct the research entitled "The Effectiveness of Herringbone Technique on Students Reading Narrative Text at the Tenth-Grade Students of SMAN 1 Kota Mojokerto

RESEARCH METHODOLOGY

This chapter explains research method applied in this research. It covers research design, population and sample, experimental treatment and control treatment, research instrument, data collection, and data analysis.

A. Research Design

The design of this research was quantitative research. According to Creswell (2009: 4), quantitative research is a means for testing objective theory by examining the relationship among variables. In quantitative research there are some kinds of designs, one of them is experimental research design. This research used that design specifically quasi experimental research design using posttest only design. Quasi experimental research design is research that is done by involving the control group and the experimental group to compare. When the researcher can only assign randomly different treatments to two different classes, the researcher uses quasi experimental research design (Charles, C.M. in Latief, 2014: 95).

Because this is experimental research, the researcher used the experimental and control group. For experimental group, the material presented was using herringbone technique while for the control group, the materials presented was using non herringbone technique. The researcher intended to know how the effectiveness of herringbone technique in teaching reading narrative text at the tenth-grade students of SMAN 1 Kota Mojokerto is. After given the treatments, both groups had the same posttest. Posttest was used to know whether there is a significant effect between the students taught using herringbone technique and those taught using non herringbone technique. The research designs can be drawn as follow:

Table 1. Quasi Experimental Research Design

Experimental	X_1	O_1
Control	X_2	O_2

X_1 : Experimental Treatment

X_2 : Control Treatment

O_1, O_2 : Posttest

To make clear about the procedure in each class treatments, the procedures will be presented in the following table:

B. The Procedures of the Experimental Treatment

Table 2. The Procedure of the Experimental Treatment

No	Strategies	Instructional focus	Teachers' activity	Students' activities
1	Pre-reading activities	Brainstorming	Greetings Checking the attendance Giving motivation by using narrative story	Responding the teacher Responding the teacher Responding the teacher
2	Whilst reading activities	Reading a story by using	Introduction a topic by using	Responding the teacher

No.	Strategies	Instructional focus	Teachers' activities	Students' activities
		narrative text	narrative story Explaining the material Giving the students narrative story and explain about it Leading the students to read narrative story Giving the students question about the paragraph of narrative story Introducing the form of herringbone technique to find the information about the text Leading the student to practice the technique	Paying attention to the teacher Paying attention to the teacher Responding the teacher Students answer question
3	Post-reading activities	Summarizing	Giving feedback Giving conclusion Closing	Receiving the feedback Paying attention and ask the question if the students need Responding the teacher

C. The Procedure of Control Treatment

Table 3. The Procedure of the Control Treatment

No.	Strategies	Instructional focus	Teachers' activities	Students' activities
1	Pre-reading activities	Brainstorming	Greetings Checking the attendance Giving motivation by using narrative story	Responding the teacher Responding the teacher Responding the teacher
2	Whilst-reading activities	Reading a story by using narrative text	Introduction a topic by using narrative story Explaining the material Giving the students narrative story Leading the students to read narrative story Giving the students question about the paragraph of narrative story	Responding the teacher Paying attention to the teacher Paying attention to the teacher Responding the teacher Students answer question
3	Post-reading activities	Summarizing	Giving feedback Giving conclusion Closing	Receiving the feedback Paying attention and ask the question if the students need Responding

D. Subject of the Research

The researcher chose tents-grade students as the population in this research. According to Borg, W.R. & Gall, M.D. (in Latief, 2014: 181), target population in educational research usually is defined as all the members of a real or hypothetical set of people, events, or objects to which educational researches wish to generalize the result of the research. The researcher chose the tenth-grade students because the researcher intended the effectiveness of herringbone technique in reading narrative text that suitable with the tenth-grade current syllabus. The populations were the tenth-grade students of SMAN 1Kota Mojokerto that consisted of tenth classes with total students 313 students.

From the population, the researcher chose randomly the sample. So, the researcher made lottery than took two of them randomly to become the research samples. Then the researcher chose randomly the class that become experimental class and the class that become control class. The researcher got X IPA 4 class and X IPA 5 class as the research samples. Finally, after the researcher chose randomly the class, the researcher got X IPA 5 that consist of 34 students as the experimental class and X IPA 4 that consists of 35 students as the control class.

E. Research Variables

There are two kinds of variable used in experimental research. Those are independent variable and dependent variable. In this research, the researcher used herringbone technique as the independent variable and reading comprehension as the dependent variable.

F. Data Resources

Based on the resources, research data are divided into two kinds. Those are primary data resources and secondary data resources. The primary data resource is the data gained directly from the research subject using some instruments that immediately given to the subjects. While the secondary data resource is data obtained through other parties and not directly obtained by the researcher from the subject of his/her research.

In this research, the data resource is primary data resource because it was directly gotten from the research subject using an instrument. The data collected in this research was the students' scores in posttest from both groups.

G. Data Collection

Data collection is an important aspect of this research. The data would be collected using test. This test (posttest) was given for both group (experimental and control group) to get the data. The test consisted of 50 multiple choice questions consists of narrative texts comprehension. Each class had one meeting for the test and the students had 90 minutes to finish the test. The score for each number was 2. If the students answer all items correctly, they will get scores 100 (2 × 50 = 100). From the description, it could be concluded that the highest score of this test was 100 scores. The score also could be calculated with the following formula:

$$\text{Score} = \frac{\text{Correct Answers}}{\text{Number of Questions}} \times 100$$

H. Research Instrument

The research instrument employed in this research was test. Test is a method of measuring a person 's ability or knowledge in a given domain (Brown, 2004: 3). The kind of the test was multiple choice questions containing 50 questions of narrative text comprehension. From the test administered, the researcher will gain the data.

That instrument would be the construct validity evidence from the data. The coverage of the instrument that must be finished by the students should represent all the sample subjects in reading comprehension. If there is enough coverage of that instrument, it would be the content validity evidence of the data. In this research, the content of the instrument was arranged by relating the content to the Standard Competence and Basic Competence of English lesson in 2013 curriculum. The indicators of the test items must be convenient with the content of curriculum indicators. The reading comprehension questions constructed by the researcher involved some questions indicators, those were: a) topic, main idea or title, b) reference (explicit information), c) inference (implicit information), d) negative questions, e) vocabulary or paraphrase, and f) author's attitude (communicative purpose, moral value). Those two supporting validities evidence explained above would show that the data results from the test are valid. After all the instruments validated and fixed, the instrument was ready to be given as the posttest after the treatment in experimental group and control group.

I. Data Analysis

The data results of this research would be analyzed statistically using some formulas. Because this research is quasi experimental research, so the researcher would use t-test to know the significant difference between experimental class and the control class. There are two kinds of t-test formula. Those are dependent t-test and independent t-test. The independent *t*-test is used in situations in which there are two experimental conditions and different participants have been used in each condition (Field, 2009: 334).

After had a calculation using formula above (mean score, variance and standard deviation), the researcher could calculate t-test and then compare the t_{value} and t_{table}. The researcher should find out the value of t_{table} based on the significance level 5%. To find out the value of t-table, the researcher had to calculate the degree of freedom (df). Then, if t_{value} is bigger than t_{table} ($t_{value} \geq t_{table}$), the Null Hypothesis (Ho) is rejected. It means there is a significant difference between teaching using herringbone technique and teaching using without herringbone technique. If t_{value} is smaller than t_{table} ($t_{value} \leq t_{table}$), the Null Hypothesis (Ho) is accepted. It means there is no significant difference between teaching using herringbone technique and teaching using without herringbone technique.

DISCUSSION

A. Research Findings and Data Presentation

The purpose of this chapter was conducted to get precise data about the difference of teaching reading narrative text by using herringbone technique to the tenth-grade students of SMAN 1 Kota Mojokerto in academic year 2018/2019 and those not. The sample of the research consists of 34 students in X IPA 5 as the experimental class and 35 students in X IPA 4 as the control class. The result of the data was obtained from post-test administered to those two groups.

1. The Result of Experimental Class

There are two kinds of data presented in this research. Those are the students' score in experimental class and the students' score in control class.

2. The Result of Control Class

The researcher gave the control class a treatment using non herringbone technique. The score also gotten from the calculation using the formula in Chapter III (see page: 44). The researcher concluded that the highest score in control class was 88 and the lowest score was 68. To see the differences of two groups' scores, the scores of the two classes are presented in the following chart:
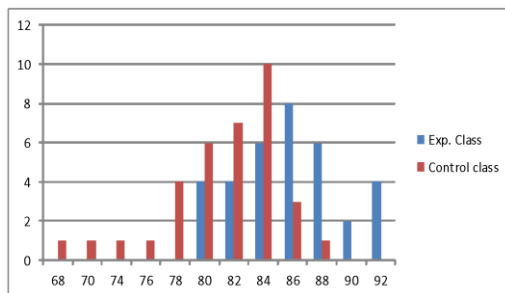

Chart 1. The Experimental and Control Class Students' Scores Comparison

From the chart above, the researcher known that students in experimental class got better score and no student got score under the standard minimum score than students in control class which there are some students got score under the standard minimum score.

2. Data Analysis

The last process of this research was analyzing the data using several formulas. Firstly, to determine what kind of t-test formula will be used, the researcher should calculate homogeneity test. The researcher was used manual calculation of F-test (homogeneity test). The data analysis in this research included accounting the mean score, variance, standard deviation, homogeneity test and t-test. Here are the calculations of the data: Based on the calculation of the mean score, the experimental class mean score was 85, 7647 and the control class mean score was 81, 1429. It presented an enough difference between the mean score in experimental class treated using herringbone technique which was higher than the mean score in control class treated using non-herringbone technique.

1. Variance and Standard Deviation

After calculating the mean score, the researcher used the mean score of each class to calculate the standard deviation and variance. The following table contains analysis to make the calculation of the variance and standard deviation clearer and easier.

2. Homogeneity of the Variance

Based on the calculation, the researcher concluded that F_{value} was lowest than F_{table} (1, 41 < 1, 81). It means that the variance was homogenous. It can be said that the variance are homogeneous ($\sigma_1^2 = \sigma_2^2$), and the number of the students are different ($n_1 \neq n_2$).

3. T-test

According to the result of the homogeneity test, it was suitable with the criteria number 2 (see page: 47), that is: So, in this case, the researcher will use polled variance independent t-test to compare two means.

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{\frac{(n_1-1)\,s_1^2 + (n_2-1)\,s_2^2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$= \frac{85,7647 - 81,1429}{\sqrt{\frac{(34-1)\,13,0339 + (35-1)\,18,4201}{34 + 35 - 2}\left(\frac{1}{34} + \frac{1}{35}\right)}}$$

$$= \frac{4,6218}{\sqrt{\frac{(33)\,13,0339 + (34)\,18,4201}{67}\left(0,0294 + 0,0286\right)}}$$

$$= \frac{4,6218}{\sqrt{\frac{430,118 + 626,285}{67}\left(0,058\right)}}$$

$$= \frac{4,6218}{\sqrt{\frac{1056,403}{67}\left(0,058\right)}}$$

$$=$$

$$\frac{4,6218}{\sqrt{\frac{1056,403}{67}}\,(0,058)}$$

$$\frac{4,6218}{\sqrt{15,7672 \times 0,058}}$$

$$= \frac{4,6218}{\sqrt{15,7672 \times 0,058}}$$

$$\frac{4,6218 \quad 4,6218}{\sqrt{0,9145}\sqrt{0,9145}}$$

$$= \frac{4,6218 4,6218}{0,9563 0,9563}$$

=

t = 4, 8330

t_{value} = 4, 8330

t_{table} with df = $n_1 + n_2 - 2$ (df = 34 + 35 − 2 = 67) with significant level 5% is 1, 668. From the result above, it shows that t_{value} is higher than t_{table} (t_{value} > t_{table}) that is 4, 833 > 1,668.

4. **Interpretation of the Research Results**

The findings of this research showed that the research showed positive results. It was supported with the result of the mean score calculation of the two groups that the experimental class gain higher mean score that is 85, 7647 than the mean score of the control class that is

$$\overline{XX} \qquad \overline{XX}$$

81, 1429 ($_1$ > $_2$ = 85, 7647 > 81, 1429). It also supported with the result of t-test that showed a significant difference between the t_{value} and t_{table}. The t_{value} was higher than t_{value} (t_{value} > t_{table}) that is 4, 833 > 1,669 with significant level 5%. It could be concluded that the Null Hypothesis (Ho) was rejected, and the Alternative Hypothesis (Ha) was accepted. 4, 833 > 1,669 with the significant level 5%

Ha is accepted because t_{value} > t_{table}

Ha: *"There is significant difference between the students taught using herringbone technique in reading narrative text than the students taught using non herringbone technique at the tenth-grade students of SMAN 1 Kota Mojokerto ".*

Based on the statement above, it could be said that the theoretical hypothesis *"The students taught using herringbone*

technique achieve better in reading comprehension than those taught using non-herringbone technique at the tenth-grade students of SMAN 1 Kota Mojokerto ." is accepted and proved.

The positive effect also showed from the students' response to the process of learning using herringbone technique. The students in experimental class enthusiastically followed the lessons of reading narrative text. With the interesting graphic organizer, the students were having a new creative learning so that it prevents the students to become bored in the class during reading lesson. They also learned to become a good reader through proper technique. They easily gained the information from the text because they have questions in mind while reading that they provided before. It is true that the students also can identify general and specific information, and also comprehends the reading text easily and accurately by applying herringbone technique (Handayani, Tasnim & Santihastuti, 2016: 535). It makes the herringbone technique can be one of reliable technique that can be applied in reading class to get more good reader.

The control class also had given the treatment using non herringbone technique. The students also followed the lesson actively, but they easily lost their interest in reading because there was no creative process. They are also easy to become boring because some of them have less vocabulary in their mind so that to gain meaning from the text they should look for it in the dictionary many times without any help. Those students need reading strategy to get a better reading. In conclusion, Herringbone Technique is Effective for Teaching Students Reading Narrative Text at The Tenth-Grade Students of SMAN 1Kota Mojokerto.

CONCLUSION

Based on the result of the previous chapter, it is concluded that herringbone technique is important in teaching reading comprehension. By using herringbone technique, the students can easily learn because herringbone technique helps students organize important information in a text chapter. Besides, after analyzed the data, the researcher found the calculation that the mean score of the experimental

class is 85, 7647 and the mean score of the control class is 81, 1429. It meant that the experimental class students mean score is higher than the control class students mean score. In the other words, the use of herringbone technique has significant effect towards students' reading narrative text.

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