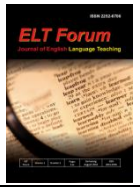
ELT FORUM 5 (2) (2016)

Journal of English Language Teaching

http://journal.unnes.ac.id/sju/index.php/elt



THE EFFECTIVENESS OF HERRINGBONE TECHNIQUE TO TEACH READING OF NARRATIVE TEXT

Andi Yusuf Kurniawan✉ **Dra. Indrawati, M. Hum.**

English Department. Faculty of Languages and Arts. State University of Semarang.

Aticle Info

Article History:
Received in April 2016
Approved in April 2016
Published in May 2016

Keywords:
Herringbone Technique, Teach Reading, Narrative Text.

Abstract

This final project is based on the research which attempted to find out the effectiveness of Herringbone technique to teach reading of narrative text. The design of this study was experimental study. There were two groups used in the research; the experimental group and the control group. The two groups were given different treatments. The experimental group was taught by using Herringbone technique while the control group was taught using conventional technique.

The population of this study was the eighth grade students of SMP Negeri 24 Semarang in the academic year of 2015/2016. The number of the subjects was 64 students. The data were obtained by administering reading test to the VIII A as control group and VIII B as experimental group. The research was started by giving pre-test, treatments, and post-test to both experimental groups and control groups. The data of the test were analyzed by using t-test formula to know the difference of the students' comprehension in reading narrative text between two groups. The data analysis in research ,some purpose can be drawn as follow.

The first purpose of the study is to discuss the effectiveness of teaching reading using Herringbone technique to improve students' reading of narrative text. The use of Herringbone technique in teaching reading makes the activity in class more interesting. The students are active and more enthusiastic following the teachers' instruction and working in group.

The second purpose of the study is to analyze the significant difference between teaching reading using Herringbone technique and the one using conventional technique. The difference in score of both test can be drawn as follow. The average score of pre-test of the experimental group was 67.75 and the control group was 65.59. The average score of post-test of the experimental group was 71.31 while the control one was 69.71. The result of the t-test of mean difference was 8.94 and t-table was 2.00. It means that t-value is higher than t-table (8.94>2.00). It can be concluded that there is a significant difference between teaching reading using Herringbone technique and the one using conventional technique. Based on the research conducted, it proved that the use of Herringbone technique is effective as a strategy to improve teaching reading comprehension of narrative text to the eighth year students of SMP Negeri 24 Semarang.

✉ Correspondent Address:
B3 Building FBS Unnes
Sekaran, Gunungpati, Semarang, 50229
E-mail: andiurnia@gmail.com

ISSN 2252-6706

INTRODUCTION

Background of the Study

English as a global language is used in almost all countries in the world as a means of international communication. Because of its significant role, English has been included in Indonesian educational curriculum. The English curriculum stipulates that English subject should include four skills, they are listening, speaking, reading, and writing. Harris (1980: 53) states that reading is a form of communication. Information and ideas are exchanged between writer and reader in the act of communicating. This information will be a new knowledge or as an entertainment which is needed by the reader. Reading activity in English as a foreign language is not the same as reading activity in the students' mother tongue such as Javanese and Indonesian, therefore reading causes students to face difficulties in vocabulary, structure, pronunciation, etc. In the process of learning English, especially reading a lot of students who are having difficulty. There are several kinds of difficulties experienced by students as a lack of material books, incomplete dictionary and a boring material. The students think that reading English is not interesting and boring since they do not know the meaning of the words and do not find an interesting book. The students need many kinds of interesting materials so that they will be more enthusiastic and active to learn English.

Based on the background above, the writer will introduce English reading activity to the students by using a technique that is Herringbone technique. This technique is addressed to optimize teaching reading. In this study, the writer will apply technique using graphic organizer in fish diagram of Herringbone technique to teach reading of narrative text for the Eight Grade of Junior High School students. The problems stated in this study are:

1. How effective is teaching reading using Herringbone technique to teach students' reading of narrative text?

2. What is the significant difference between of the students' achievement taught by Herringbone technique and those who are taught by conventional technique?

Deegan (2006) states that the Herringbone technique develops comprehension of the main idea by plotting the who, what, when, where, how, and why questions on a visual diagram of a fish skeleton. Herringbone Technique consists of a short graphic organizer and it is a concrete way of helping English learners to find the comprehensive idea in a paragraph or passage. The students can use this graphic organizer when taking notes for assigned reading as a way to organize and classify new information. The students answer the questions listed in the fish skeleton graphic organizer. This leads to the synthesis of all the information in one newly created sentence, which becomes the main idea statement. Graphic organizer is important and effective pedagogical tools for organizing content, ideas, and facilitating learners' comprehension of newly acquired information (McKnight, 2010: 1). It is an effective teaching and learning tool for all types of learners.

Edwards (2003:32) mentioned that the procedures of Herringbone technique are:

1. Select reading material at the students' level.

2. Construct the Herringbone technique outline with the 5W+1H (Who? When? Where? Why? What? How?) and the main idea. (See following diagram or graphic).

3. Students read, brainstorm and write important information about the story in their book.

4. After discussion, the students write answers on the Herringbone technique outline.

5. Students discuss answers (5W+1H+main idea).

6. The Herringbone technique outline is used for the revision of the story.

METHOD OF STUDY

In this research, I used experimental study. Arikunto (2010:207) stated that experimental research is a research which has a purpose to investigate whether there is an effect of something that is treated to the subject of research. In other words, an experimental research tends to observe whether there is the cause and effect relation or not. The research can be conducted by comparing

one or more experimental groups which are given treatment with one or more control groups which do not get any treatment. The population in this study was the eight grade students of SMP Negeri 24 Semarang, Kota Semarang in the academic year 2015/2016. The eight grade in SMP Negeri 24 Semarang consisted of eight classes. The samples were divided into two groups. The first group is the experimental group and the second one is the control group. The sample of this research was the students of eight graders of SMP Negeri 24 Semarang in the academic year 2015/2016. The total sample is 64 students. The first group was class VIII A as the experimental group consist of 32 students, and the second one was class VIII B as the control group consist of 32 students.

Best (1981: 93) mentioned that independent variables are the conditions or characteristics that the experimenter manipulates, control, or observes. The independent variables are the conditions or characteristics that the experimenter manipulates in her attempt to ascertain their relationship to observed phenomena. The dependent variables are the conditions or characteristics that appear, disappear, or change as the experimenter introduces, removes, or changes independent variables (Best, 1981: 66). From those definitions, it can be said that the independent variable of this study is Herringbone technique and the dependent variable of this study is students' achievement score in reading narrative texts. The writer conducted the research to find out the effectiveness of Herringbone technique to teach reading of narrative text.

The students' reading result of pre-test, treatments and post-test were administered to know whether the use of Herringbone technique is effective or not to improve students' reading of narrative text. At the beginning of the research, the writer determines the experimental and control group. Pre-test and post-test would given to both groups. Pre-test would administered before giving the treatment in order to know the students' prior knowledge. The Herringbone technique as treatment would given to the experimental group, whereas the control group would taught by using conventional technique. At the end of the research, post-test would given to get the final result.

DISCUSSION

Analysis of the Try out Test

The analysis was to get a good instrument for investigation. The try out test was conducted on 12 January 2015. It was given to the eight grade students of SMP Negeri 24 Semarang consisting of 32 respondents. The VIII E was chosen as the try out group. The try out test is in form of multiple choices items which consist of 35 questions. The following are the data analysis of the try out test to know whether the instrument that used in the research fulfill the requirements a good instrument or not.

Validity

A good test has to be valid. Validity refers to the precise measurements of the test. The validity computation is consulted with the r *table* of Product Moment by determining the significant level of 5% and *N* which is according to the data. If the rxy > r *table* so the instrument is valid. For α = 5% and N = 32, r *table* = 0.349. In order to find the validity of the test, the writer used the following formula:

$$r_{xy} = \frac{32(732) - (28)(814)}{\sqrt{\{(32)(28) - 28^2\}\{(32)(21604) - (736)^2\}}}$$

$$r_{xy} = 0.42$$

The item number 2 of the try out test was valid since its rxy = 0.42. After all the item numbers were analyzed, there were 27 valid items from 35 items and the test were 8 invalid. From the distribution above, it can be concluded that the try out instrument had 27 valid items and 8 invalid items.

Reliability

Reliability of the test shows the stability or consistency of the test scores when the test is used. The following is the computation of the reliability of the instrument. The formula is:

$$r_{11} = \left(\frac{35}{35-1}\right)\left(\frac{-540.89 - 6.7}{-540.89}\right)$$

$$r_{11} = 1.04$$

The result of computation reliability of the try out test instruments was 1.04. For α = 5% with N = 32, and r *table* = 0.349. Since the result of r_{11} was higher than r *table,* it was concluded that the try out test instrument was reliable and could be used as the instrument to get the data.

Discriminating Power

Heaton (1975: 174) said that the discriminating power measured how well the test items arranged to identify the differences in the students' competence. After the trial test was carried out, an analysis was made to find out the discriminating power of each item. To calculate the discriminating power of each item, the writer used the following formula:

$$D = \frac{BA}{JA} - \frac{BB}{JB}$$

$$D = \frac{16}{16} - \frac{12}{16} = 0{,}25$$

The computation of discriminating power of the try out test instruments of item number 2:

Upper Group			Lower Group		
No.	Code	Score	No.	Code	Score
1	**R-16**	1	1	**R-29**	1
2	**R-1**	1	2	**R-2**	1
3	**R-14**	1	3	**R-6**	1
4	**R-19**	1	4	**R-12**	1
5	**R-25**	1	5	**R-24**	1
6	**R-32**	1	6	**R-27**	0
7	**R-3**	1	7	**R-31**	1
8	**R-4**	1	8	**R-20**	1
9	**R-7**	1	9	**R-21**	0
10	**R-8**	1	10	**R-26**	1
11	**R-28**	1	11	**R-13**	1
12	**R-30**	1	12	**R-15**	1
13	**R-9**	1	13	**R-5**	0
14	**R-10**	1	14	**R-11**	1
15	**R-18**	1	15	**R-17**	1
16	**R-22**	1	16	**R-23**	0
Sum		16	Sum		12

According to the criteria, the item number 2 is satisfactory so this item can be used. From the table above, it was found that 8 items were said to be poor, 19 items were said to be satisfactory, 8 items were said to be good, and no item was said to be excellent.

Difficulty Level

A good test is a test which is not too easy and difficult. The formula that was used to count the difficulty level of each item was:

$$P = \frac{B}{JS}$$

$$P = \frac{16 + 12}{35} = \frac{28}{35} = 0.80$$

The computation of the difficulty level of the try out test instruments of item number 2 is easy. It means that the item was not too easy and too difficult for the students to do. After computing the overall 35 items of try out test, it was found that 21 items were classified to be easy, 13 items were classified to be medium and 1 item were classified to be difficult.

The Different Result between Students' Score in Experimental and Control Group

From the calculation of the students' score, it showed the significant difference between students' score in the experimental and control group.

The pre-test and post-test score of the experimental group

NO	Experimental Group		
	Student Code	Pre Test	Post Test
1	E-01	60	72
2	E-02	62	76
3	E-03	66	82
4	E-04	56	69
5	E-05	55	68
6	E-06	62	72
7	E-07	54	72
8	E-08	67	72
9	E-09	56	76
10	E-10	65	76
11	E-11	70	80
12	E-12	64	80
13	E-13	72	76
14	E-14	76	81
15	E-15	68	76
16	E-16	64	72
17	E-17	66	72
18	E-18	74	80
19	E-19	56	72
20	E-20	52	72
21	E-21	70	80
22	E-22	66	76
23	E-23	74	80
24	E-24	66	76
25	E-25	70	76
26	E-26	74	80
27	E-27	62	76
28	E-28	61	80
29	E-29	76	80
30	E-30	60	72
31	E-31	65	75
32	E-32	65	78
	Total	2168	2282
	N	32	32
	Highest score	76	82
	Lowest score	52	69
	Mean	67.75	71.3125
	Varian	78.823	62.5471

The pre-test and post-test score of the control group

NO	CONTROL GROUP		
	STUDENT CODE	**PRETEST**	**POSTTEST**
1	C-01	64	72
2	C-02	68	76
3	C-03	64	64
4	C-04	54	64
5	C-05	64	72
6	C-06	68	72
7	C-07	72	76
8	C-08	56	72
9	C-9	64	72
10	C-10	54	68
11	C-11	56	76
12	C-12	64	80
13	C-13	54	72
14	C-14	64	68
15	C-15	56	72
16	C-16	64	72
17	C-17	54	68
18	C-18	56	64
19	C-19	54	76
20	C-20	72	72
21	C-21	56	80
22	C-22	56	76
23	C-23	64	68
24	C-24	56	70
25	C-25	68	72
26	C-26	54	72
27	C-27	68	72
28	C-28	54	68
29	C-29	68	72
30	C-30	58	72
31	C-31	55	75
32	C-32	54	75
	TOTAL	2099	2231
	N	32	32
	HIGHEST	72	80
	LOWEST	54	64
	MEAN	65.59	69.7187
	VARIAN	64.5851	29.9264

After analyzing the two results between the pre-test and post-test, it was found that the mean of the pre-test achieved by the students in experimental group using Herringbone technique was 67.75. Meanwhile, the mean of the post-test of the same group was 71.31.

In a rather simpler observation, it can be concluded that there was a significant improvement between the pre-test and the post-test scores achieved by the students of experimental group. The control group using conventional technique showed the

improvement. The mean score of the control group was 65.59 for the pretest and 69.71 for the posttest.

The Average Scores of the Experimental and the Control Group

After getting all the scores, the computation was made. The first way to know the significant difference between the experimental group and control group is to see through the difference of the means of the two groups. The following formula was used to get the means:

a. the mean of the pretest of the experimental group:

$$Mx = \frac{2168}{32}$$

$$M\,x = 67.75$$

b. the mean of the pretest of the control group:

$$My = \frac{2099}{32}$$

$$My = \ 65.59$$

c. the mean of the posttest of the experimental group:

$$Mx = \frac{2282}{32}$$

$$Mx = 71.31$$

d. the mean of the posttest of the control group:

$$My = \frac{2108}{32}$$

$$My = 69.71$$

The average scores of students in the experimental group and control group before the treatment were almost the same. After the writer gave the treatment to the experimental group, the post-test result showed that the average score of the students improved until 71.31 from the previous average of pre-test 67.75. On the other hand, the control group got 69.71 as the average of post-test. In the pre-test the control group got 65.59. From the result, it can be concluded that the treatment which was given in experimental group achieved the better result.

Discussion of Students' Mastery level

In order to show the students' mastery level in reading comprehension, the writer classified the students' score in five grades, namely A, B, C, D, and E. The students' score was transformed into percentage. The students' level of achievement can be displayed as follows:

The Achievement of the Experimental Group

Grade	Frequency		Percentage	
	Pre-Test	Post Test	Pre-Test	Post Test
A	1	2	3.3%	6.6%
B	4	18	13.3%	60%
C	14	8	46.6%	26.6%
D	8	2	26.6%	6.6%
E	3	0	10%	0%

The table showed that the pre-test percentage of grade A was 3.3%. The following was the example of percentage computation for grade A, and the other items would use the same formula:

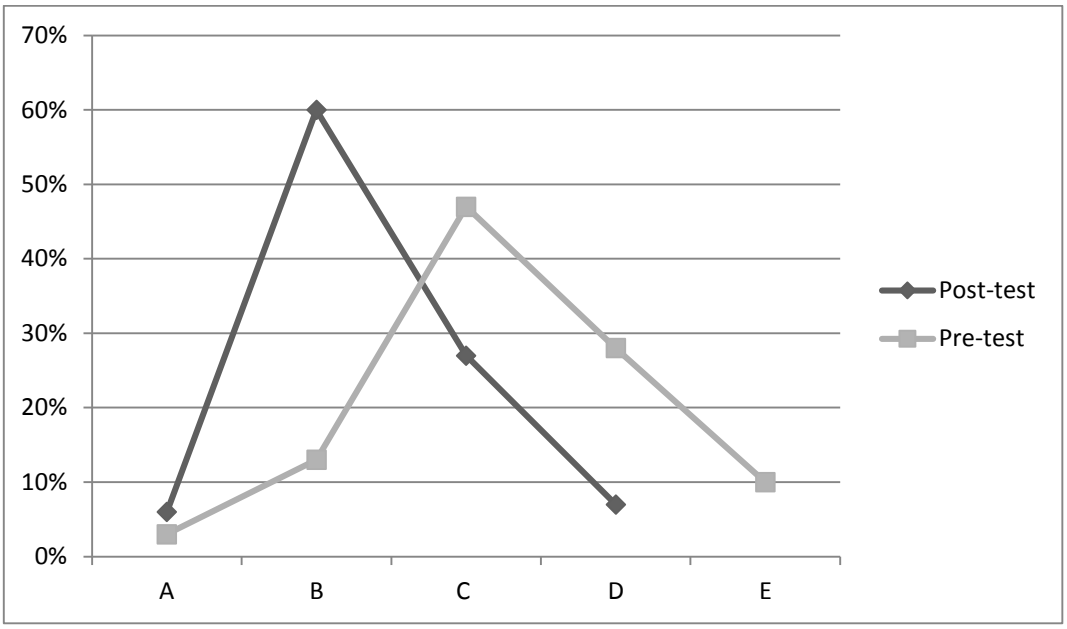
Percentage pre-test for grade A = (pretest frequency of grade A: total frequency pretest) x 100%.

= (1 : 30) x 100%

= 3.3 %

The achievement level of the experimental group can be shown in the form of polygon below:

Graphic 1



The polygon showed that the percentage of students' achievement in grade A and B increased significantly for the post-test. It can be concluded that the students' mastery level of the experimental group had been improved significantly after the treatment was given.

The writer collected the data from the students' scores achievement of the reading comprehension test. The students' scores of pre-test and post-test from the experimental and the control group were obtained. The followings are the simple table for the mean of pre-test and post-test of students' scores:

Analysis of the Pre-test and Post-Test Score

The mean of pre-test and post-test of students' scores

Group	**The mean score of the pre-test**	**The mean score of the post-test**
The experimental group	67.75	71.31
The control group	65.59	69.71

The table shows that the average of post-test scores in experimental group were higher than the average of post-test scores in control group. From the comparison, it can be conclude that the treatment was effective.

Homogeneity

The homogeneity test was conducted to find out whether the groups' were similar in their English reading achievement or not. Homogeneity was to know that both two classes are homogeneous. It was important because the similarity of both objects would influence the test result. If both classes are not homogenous, the treatment also cannot be conducted because both classes do not have similar ability in reading narrative text achievement. In order to calculate the homogeneity of post-test from experimental and control group, the writer used the following formula:

$$F = \frac{V_e}{V_c}$$

$$F = \frac{78.823}{64.5851}$$

$$F = 1.2205 = 1.22$$

The result was consulted with the value of F table with dk numerator Ve = n_1 - 1 = 32 - 1 = 31, the dk numerator Vc = n_2 - 1 = 32 -1 =31, and α=5%, squared to Ve= 32 and Vc = 32 was 1.85. The result of the homogeneity test showed that there was homogeny. It was concluded based on

the students' reading ability between the experimental group and the control group on the pre-test where the F value was lower than the F table that was 1.22 compared to 1.85 as the F table. By knowing the result of homogeneity test the writer concluded that the two groups were homogeneity so that the research could be continued on those two groups as the objects of the study.

Normality

The normality of the data was analyzed as well as the homogeneity. After finishing the process of the pre-test data gathering, the normality should be checked in order to know if the data could be analyzed. Normality was counted to know that all scores are normal.

Normality of the Experimental Group

Based on the data of pre-test of the experimental group, the normality was analyzed. The computation, X^2*hitung* was 3.08 and $X^2(\alpha)(dk)=X2(5\%)(2) = 5.99$. The result showed that the data was normal because X^2*hitung* 3.08< 5.99 then pre-test score for the experimental group was said to be normally distributed.

Normality of the Control Group

Based on the computation, X^2*hitung* was 2.84. Then, the pre-test results of the control group were consulted with critical value of $X^2(\alpha)(dk)$ with $\alpha = 0.05$ and dk=2, whose result was 7.82. Since the value of $X^2(\alpha)(dk)$ of pre-test of the control group were lower than 7.82, the data were considered to be normally distributed.

Test of Significance

After getting the pre-test and post-test scores of the experimental and control group, the results were formulated with t-test formula. The t-test formula is:

The computation of t-test was:

$$s = \sqrt{\frac{(32-1)34.9655 + (32-1)79.8889}{32+32-2}}$$

$$s = 7.59$$

And to find the *t*-value, I used the formula:

$$t = \frac{\overline{X_1} - \overline{X_2}}{{}_s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$t = \frac{77.00 - 70.27}{{}_{7.578074}\sqrt{\frac{1}{32} + \frac{1}{32}}}$$

$$t = 3.44$$

The value of the t-table with dk = 32+32 - 2 = 62 and significant level (α) =5% was 2.00. As the value (3.44) > 2.00, it could be concluded that there was significant difference on post-test between experimental group and control group.

T-T for Reading Achievement's Gain Difference

The result of the t-test became the quantitative proof whether the difference of the pretest and posttest means of both group was significant or not. From the known data, then we could calculate the gain of pretest and posttest from the experimental and control group was as follows:

$$s = \sqrt{\frac{[32-1][54.40] + [32-1][75.57]}{32+32-2}} = 8.03$$

$$s = 8.03$$

And to find the *t*-value, I used the formula

$t(0.95)(62) = 2$

$$t = \frac{24.80 - 6.27}{8.03\sqrt{\frac{1}{32} + \frac{1}{32}}} = 8.94$$

The value of the t-table with dk = 32 + 32 - 2 = 62 and significance level (α) = 5% was 2.00. As the value (8.94) > 2.00.

The result of pre-test and post test

From the result of the pre-test, it can be found that the mean score of the pre-test of experimental group was 67.75 and the control group was 65.59. The result of post test of experimental group was 71.31 while the control group gained 69.71. Based on the score, it can be seen that the score of experimental group was higher than the control group. The result of the *t*-test of mean difference was 8.94 and *t*- table was 2.00. Based on the computation above, it could be seen that *t*- value > *t*- table. The hypothesis that "there is significant difference in the teaching

reading of narrative text using Herringbone technique" was accepted.

Based on the tests conducted, it was proved that the use of Herringbone technique is effective as a strategy in teaching narrative text to the eight grade students of SMP Negeri 24 Semarang. The use of Herringbone technique made the reading and learning activity more effective. The students of experimental group who were taught using Herringbone technique looked more interested and enthusiastic during the treatment given by the writer than the control group which were taught using conventional technique.

The result of their post-test was higher than their pre-test. Finally, Herringbone technique makes the students more interested in learning. It is easier to learn the lesson. It can be concluded that in this study, the use of Herringbone technique as a strategy in teaching reading of narrative text was effective for the eighth grade students of SMP Negeri 24 Semarang in the academic year of 2015/2016.

CONCLUSIONS

The first purpose of the study is to discuss the effectiveness of teaching reading using Herringbone technique to teach students' reading of narrative text. The use of Herringbone technique in teaching reading makes the activity in class more interesting. The students are active and very enthusiastic following the teachers' instruction and working in group. This strategy allows students to explore ideas while they read the passage in group. Finally, the Herringbone technique makes the students more enthusiastic in learning and easier to understand the lesson.

The second purpose of the study is to analyze the significant difference between of the students' achievement taught by Herringbone technique and those who are taught by conventional technique. The difference in score of the post-test test can be drawn as follow. In the score average between experimental group of 71.31 and control group of 69.71. It can be concluded that the experimental group got higher score than the control group. The result of t value > t table (3.44 >2.00) which means that there is a significant difference between teaching reading using Herringbone technique and the one using conventional technique.

REFERENCES

Arikunto, Suharsimi. 2010. *Manajemen Penelitian (Revised Edition).* Jakarta: Rineka Cipta.

Best, John.W. 1981. *Research in Education* (Revised Ed.). New Jersey: Prentice-Hall.

Deegan. J. 2006. Herringbone Technique. Available at http://www.teacherweb.com/PA/NazarethAreaMiddleSchool/TheSpecialistTeam/HerringboneTechnique.doc. [Accessed 2/8/2014]

Edwards, Peter. 2003. *Literacy Techniques: For Teachers and Parents (3rd Edition).* Victoria: Trafford.

Harris, K. 1980. *Reading in Content Areas .Strategies for Reading to Learn. Semantic Maps*. University of Virginia.

Heaton, J. B. 1975. *English Language Tests*. England: Longman.

McKnight, Katherine S. 2010. *The Teacher's Big Book of Graphic Organizers: 100 Reproducible Organizers that Help Kids with Reading, Writing, and the Content Areas*. San Francisco: Jossey-Bass.