

CHAPTER IV

FINDINGS AND DISCUSSION

A. Findings

There are three problems discussed in this chapter. The first finding in this research described about the students' reading comprehension in experiment class by using Herringbone pattern. The second finding is about the students' reading comprehension in control class without using Herringbone pattern, and the last finding is about the effectiveness of using Herringbone pattern in teaching reading comprehension.

1. The Students' Reading Comprehension in Experiment Class

The first finding in this research described about the students' reading comprehension in experiment class by using Herringbone pattern. The data shown in this part were collected from students' score in the pre-test and post-test from experiment class.

Table 4.1 Score of Pre-test and Post-test in Experiment Class

No.	Students' Initial	Pre-test Score	Post-test Score
1	AF	70	90
2	AS	60	80
3	AR	70	100

4	AIW	70	100
5	DAK	50	90
6	DFS	60	80
7	ET	70	90
8	GR	70	100
9	HN	80	100
10	HH	70	100
11	IC	70	90
12	MA	50	90
13	MAD	60	80
14	MAR	60	90
15	MF	80	90
16	MK	60	100
17	MRS	70	100
18	MR	60	90
19	MTH	60	90
20	MZ	50	90
21	NRS	70	80
22	NA	80	80
23	NPE	80	100
24	NL	80	100

25	NAF	50	80
26	NH	70	100
27	RRP	60	100
28	AH	50	90
29	YSN	70	90
30	YN	70	80
31	GRH	60	90
32	NZ	60	80
	Σ (Total)	2090	2910

The mean score of Pre-test from Experiment Class can be known in the next writing.

$$\begin{aligned}
 \text{Mean} &= \frac{\text{Total}}{\text{Sample}} \\
 &= \frac{2090}{32} \\
 &= 65.31
 \end{aligned}$$

The mean score of Post-test from Experiment Class can also be known in the following writing.

$$\begin{aligned}
 \text{Mean} &= \frac{\text{Total}}{\text{Sample}} \\
 &= \frac{2910}{32} \\
 &= 90.94
 \end{aligned}$$

From the description of score in experiment class above, it could be seen that from 32 students in the class, the mean score of pre-test was 65.31. Based on the table, the highest score in pre-test was 80, obtained by five students. Meanwhile, the lowest score was 50, obtained by five students. Those scores were obtained before the students got the treatment. While, the mean score of post-test was 90.93. Based on the table, the highest score in post-test was 100, obtained by eleven students and the lowest score was 70, obtained by eight students as in the following table.

Table 4.2 The Different Achievement of Students Based on the Mean Score

Class	Mean Score			
	Pre-test Score	F	Post-test Score	F
Experiment	50	5	70	0
	60	10	80	8
	70	12	90	13
	80	5	100	11
	Total	32	Total	32

Post-test score obtained after the students got the treatment by using Herringbone pattern. Based on the categories of students' achievement in Chapter III (*see table 3.2*), the researcher found that

the average score of post-test in experiment class was 90.93. It is very good category.

2. The Students' Reading Comprehension in Control Class

The second finding in this research described about students' reading comprehension in control class without using herringbone pattern. The data shown in this part were collected from students' score in the pre-test and post-test of control class.

Table 4.3 Score of Pre-test and Post-test in Control Class

No.	Students' Initial	Pre-test Score	Post-test Score
1	AR	70	100
2	AAN	80	100
3	AS	70	90
4	AH	60	90
5	AM	50	70
6	AN	70	80
7	AHK	60	90
8	DDP	80	100
9	FH	70	80
10	FJ	60	90
11	FT	70	70
12	FR	60	100
13	IT	70	90
14	KHL	50	80
15	LI	80	90
16	MSY	80	100
17	MZT	70	70
18	MS	50	70
19	ME	70	90
20	MA	70	70
21	MAF	50	70
22	MF	60	90
23	MFH	60	80

24	NU	60	80
25	NR	80	80
26	ARR	60	80
27	NKH	70	80
28	NR	60	70
29	NAI	70	100
30	STA	60	90
31	YL	70	100
32	DN	60	80
	Σ (Total)	2100	2720

The mean score of Pre-test from Control Class can be seen in the following description.

$$\begin{aligned}
 \text{Mean} &= \frac{\text{Total}}{\text{Sample}} \\
 &= \frac{2100}{32} \\
 &= 65.62
 \end{aligned}$$

The mean score of Post-test from Control Class can also be seen in the following mean.

$$\begin{aligned}
 \text{Mean} &= \frac{\text{Total}}{\text{Sample}} \\
 &= \frac{2720}{32} \\
 &= 85
 \end{aligned}$$

From the description of score in control class above, it could be seen that from 32 students in the class, the mean score of pre-test was 65.62 and the mean of post-test was 85. The lowest score in pre-test was 50 obtained by four students, and the highest score was 80, obtained by five students. After teaching news item text without Herringbone pattern, then the researcher gave the students post-test. The data showed in post-test that the lowest score was 70 obtained by seven students and the highest score was 100 obtained by seven students as in the following table.

Table 4.4 The Different Achievement of Students Based on the Mean Score

Class	Mean Score			
	Pre-test Score	F	Post-test Score	F
Control	50	4	70	7
	60	11	80	9
	70	12	90	9
	80	5	100	7
	Total	32	Total	32

According to the categories of students' achievement in Chapter III (*see table 3.2*) the researcher found that the average score of post-test in control class was 85 and it was also very good category.

Based on the description above, it can be seen that Herringbone pattern has a good impact for students in learning news item text. The

differences between students' score in experiment class and students' score in control class can be seen from the mean of post-test of both classes. The average score of post-test in experiment class is higher than the average score of post-test in control class. Thus, it can be concluded that there was a positive effect of teaching news item text by using herringbone pattern to improve students' reading comprehension.

3. The Effectiveness of Using Herringbone Pattern in Reading Comprehension

The third finding of this research described the effectiveness of using Herringbone pattern to improve the students' reading comprehension of news item text. It was indicated by the different result between experiment class which taught by using Herringbone pattern and control class which was taught by using conventional approach teaching in reading comprehension on news item text. The research was conducted in MAN 3 Banjarmasin for the Eleventh grade students. To see the effectiveness of using Herringbone pattern, some steps were conducted as follows.

1. The Data Analysis of Try-out Finding

This part covered about validity, reliability and level of difficulty.

a. Validity of Instrument

In this research, item validity was used to know the index validity of the test. To know the validity of instrument, the writer used *SPPS ver. 22* with the Pearson Correlation (*see appendix 1*) formula to analyze each item. It was obtained that from 20 test items, there were 10 test items which were valid and 10 test items which were invalid. It was invalid with the reason the validity result of their r_{count} was lower than their r_{table} value as seen in the following table.

Table 4.5 Validity of Each Item

Number of Questions	R_{count}	R_{table}	Criteria
1	0,108	0,344	Invalid
2	0,206		Invalid
3	0,217		Invalid
4	0,571		Valid
5	0,422		Valid
6	0,637		Valid
7	0,689		Valid
8	0,492		Valid
9	0,181		Invalid
10	0,126		Invalid
11	0,396		Valid
12	0,120		Invalid
13	0,420		Valid
14	0,284		Invalid
15	0,469		Valid
16	0,315		Invalid
17	0,108		Invalid
18	0,011		Invalid

19	0,647		Valid
20	0,497		Valid

Based on the table, the result of validity of the item number 1 was 0, 108. After that, the researcher consulted the result to the table of Product Moment with the number of subject (N) =32 and significance level 5% that is 0, 344. Since the result of the computation (r_{count}) was lower than r in the table index of validity (r_{table}), the items were then considered invalid. Otherwise, if ($r_{\text{count}} > r_{\text{table}}$), they were valid. Thus, ten test items were valid and ten test items were not valid, and only the valid ones were used in this research.

b. Reliability of Instrument

A good test must be valid and reliable. Reliability means “consistency”. To get the coefficient of correlation, the research applied the Product Moment computation by looking at the Cronbach’s alpha column. Cronbach’s alpha itself is a measure of internal consistency. It is considered to be a measure of scale reliability. Let us see the following table.

Table 4.6 Reliability Statistics

Cronbach’s Alpha	N of Items
0.537	20

According to the value of Cronbach's Alpha in the Reliability Statistics table, it was found out that the reliability of the test was 0.537. It is then interpreted based on the following table.

Table 4.7 Reliability Range

Range	Criteria
0,80 – 1,00	Very Good
0,60 – 0,79	Good
0,40 – 0,59	Satisfied
0,20 – 0,39	Poor
0,00 – 0,19	Very Poor

(Source: Arikunto, 2010, p. 245).

Based on the table it was found out that 0.537 is a satisfied criteria. Thus, it could be concluded that the instrument used in this research was reliable.

c. Degree of Test Difficulty

According to Arikunto, good questions are not very easy and not very difficult. The difficulty of each item can be seen in the following tables:

Table 4. 8 Test Difficulty Category

Range	Category
0,00 – 0,30	Difficult
0,31 – 0,70	Medium
0,71 – 1,00	Easy

(Source: Arikunto, 2010, p. 210).

The following table is the mean description of each item:

Table 4. 9 Degree of Test Difficulty of Each Item

Questions	N	Mean	Category
Item_1	33	0.36	Medium
Item_2	33	0.39	Medium
Item_3	33	0.88	Easy
Item_4	33	0.70	Medium
Item_5	33	0.61	Medium
Item_6	33	0.67	Medium
Item_7	33	0.33	Medium
Item_8	33	0.42	Medium
Item_9	33	0.15	Difficult
Item_10	33	0.06	Difficult
Item_11	33	0.55	Medium
Item_12	33	0.55	Medium
Item_13	33	0.30	Difficult
Item_14	33	0.45	Medium
Item_15	33	0.85	Easy
Item_16	33	0.12	Difficult
Item_17	33	0.64	Medium
Item_18	33	0.39	Medium
Item_19	33	0.73	Easy
Item_20	33	0.45	Medium

Based on the table, it was found out that the mean of item number 1 was 0,36 and it could be concluded that the index difficulty of the item number 1 is in the medium category. After computing 20 items of the try-out test, there were 3 items were considered easy, 13 items were considered medium, and there were 4 items was considered difficult.

2. Data Analysis and Hypothesis Test

Before collecting the data, the researcher did some activities to collect them during the research such as try-out the test, pre-test, treatment, conventional teaching and post-test. After the researcher finished the try-out test, she also held pre-test, treatment, conventional teaching and post-test to the students. It is hoped that the researcher will know the improvement of the students' reading comprehension on news item text by using Herringbone pattern.

a. Pre-Test Analysis

It was done to know the normality and homogeneity of the initial data in the experiment class and control class.

1) Normality test

The normality test is used to know whether the data are normally distributed or not. To test the data in this research, the researcher used the formula of *Chi-square* in *SPSS program ver.*

22. It is also said:

H_a = the data distribute normally

H_o = the data do not distribute normally

Then it is followed by the criteria:

H_a is accepted and H_o is rejected if $X^2_{count} < X^2_{table}$

H_a is rejected and H_o is accepted if $X^2_{count} > X^2_{table}$

Let us see again the following table.

Table 4.10 The Normality Result of Pre-test in Experiment

Class and Control Class

Class	X^2_{count}	X^2_{table}	Criteria
Experiment	4.750	7.81	Normal
Control	6.250	7.81	Normal

Based on the analysis above, it can be seen that X^2_{count} of both classes is lower than X^2_{table} ($X^2_{count} < X^2_{table}$). Thus, H_a is accepted and H_o is rejected. The conclusion of the distribution of the data in experiment class and control class are normal.

2) Homogeneity Test

The homogeneity test is used to know whether the group of sample that was taken from population have homogeneity or not with the criteria:

$P > 0.05$ = the data distribute homogeneously

$P < 0.05$ = the data do not distribute homogeneously

To understand it, let us see the following table.

Table 4.11 The Homogeneity Result of Pre-test in Experiment Class and

Levene Statistic	df1	df2	Sig.
.081	1	62	.777

Control Class

Based on the table of homogeneity result above, it is obtained that the significant value 0.777 is higher than 0.05 (Sig. = 0.777 > 0.05). It can be concluded that the data of experiment and control class have the same variance or are homogeneous.

b. Post-Test Analysis

It was done to know the normality, homogeneity and hypotheses test of the initial data in the experiment class and control class.

1) Normality Test

The normality test is used to know whether the data are normally distributed or not. To test the data in this research, it is used the formula *Chi-square* in *SPSS program ver. 22* and it is said:

Ha = the data distribute normally

Ho = the data do not distribute normally

Then it is followed by the criteria:

Ha is accepted and Ho is rejected if $X^2_{count} < X^2_{table}$

Ha is rejected and Ho is accepted if $X^2_{count} > X^2_{table}$

Let us see the following table.

Table 4.12 The Normality Result of Post-test in Experiment

C

	Class	X^2_{count}	X^2_{table}	Criteria
a	Experiment	1.188	5.99	Normal
s	Control	0.250	7.81	Normal

s and Control Class

Based on the analysis above, it can be seen that X^2_{count} of both classes are lower than X^2_{table} ($X^2_{\text{count}} < X^2_{\text{table}}$). Thus, H_a is accepted and H_o is rejected. The conclusion of the distribution of the data in experiment class and control class are normal.

2) Homogeneity Test

To see the homogeneity of research sample for the post-test in both Experiment and Control classes, the following table can be considered.

Table 4.13 The Homogeneity Result of Post-test in Experiment Class and Control Class

Levene Statistic	df1	df2	Sig.
6.921	1	62	.011

Based on the table of homogeneity result, it is obtained that the significant value 0.11 is higher than 0.05 (Sig. = 0.11 > 0.05). Thus, it can be concluded that the samples of experiment and control class have the same variance or are homogeneous.

3) Hypotheses Test

Hypotheses test is used to know whether there is a significant difference on post-test of experiment class and control class. The

data which are used to test the hypothesis is the score of post-test in both of the classes. To test the hypothesis, the researcher used T-test. There are two hypotheses in this research:

Ho (Null Hypotheses) = There is no significant difference between the students' reading comprehension on news item text by using Herringbone pattern in experiment class and without using it in control class at the eleventh grade of MAN 3 Banjarmasin.

Ha (Alternative Hypotheses) = There is a significant difference between the students' reading comprehension on news item text by using Herringbone pattern in experiment class and without using it in control class at the eleventh grade of MAN 3 Banjarmasin.

In this case, the following criteria will be considered:

Ha is rejected and Ho is accepted if $t_{\text{table}} > t_{\text{count}}$

Ha is accepted and Ho is rejected if $t_{\text{table}} < t_{\text{count}}$

The following table shows the result of T-test.

**Table 4.14 The Result of Computation T-test of Post-test in
Experiment Class and Control Class**

Class	N	Average	Std. Deviation (s)	T_{table}	T_{count}	Criteria
Experiment Class	32	90.93	7.771	2.000	2.528	Ha Accepted
Control Class	32	85.00	10.776			

Based on the computation above, it is obtained that the average of post-test score of the experiment class who are taught by using Herringbone pattern is 90.93 with standard deviation 7.771, while the average of post-test score of the control class who are taught by using conventional method is 85.00 with standard deviation 10.77. With the degree of freedom 5% ($df = 32 + 32 - 2 = 62$ by $\alpha = 5\%$), it is obtained that $t_{table} = 2.000$. From the result of calculation t-test, $t_{count} = 2.528$. Based on the criteria, it is known that t_{table} is lower than t_{count} ($t_{table} < t_{count}$), so H_a is accepted H_o is rejected. It means that there is a significant difference between the result of post-test in experiment class that taught by using

herringbone pattern and the result of post-test in control class that taught without using herringbone pattern.

B. Discussion

When applying this research, there were twelve meetings being conducted which could be described as follows. The first meeting of this research was held on April 28th, 2018. In this meeting the researcher gave a try-out to ensure the validity, reliability and index of difficulty of the pre-test and post-test items. It was given to class XI IIS 2.

After administering try-out, the second meeting was conducted as the pre-test that was held on July 16th, 2018. In this meeting the researcher greeted and introduced herself and explained the aim of those meeting which were planned in this research. After that, pre-test was given before the teaching was held to know students' reading comprehension on news item text before the treatment. The pre-test was given to the students in class XII IIS 1 of MAN 3 Banjarmasin as the sample and attended by 32 students. The students were given 40 minutes to do the test items by answering the questions given to them.

After administering pre-test, the researcher conducted the third one of three meetings for the treatment in experiment class on July 17th, 18th, and 19th, 2018 by using Herringbone pattern which is considering appropriate to teach news item text focused in reading skill. The first meeting of treatment the

researcher introduced Herring bone pattern to the students. Then, the researcher explained the lesson about herringbone pattern and the procedure to apply the pattern. The researcher also explained about news item text to students starting from the definition of news item text, the generic structure of the news item text and the language feature of news item text.

In the second meeting, the researcher gave example of the text based on the material. The teacher introduced herringbone pattern to help students in organizing the questions. Then, she showed one short text to the students to apply the technique to them. During the activity, the students worked in small group. In this activity, some of groups were still confused about how to apply this pattern to text. It happened because this pattern was new for them. But with step by step and detail explanation from the researcher, the students started to understand and comprehend in applying Herringbone pattern.

In the last meeting for experiment class, the teacher gave the students one news item text and herringbone pattern and asked the students to do the work individually to know the students' comprehension of the lesson. After giving treatments in experiment class, the researcher gave post-test on July 20th, 2018 which consisted 10 test items which approximately finished in 40 minutes. It was used to identify the students' ability after treatment.

On July 17th, 2018 the researcher gave pre-test for XI IIK 2 as the control class. Like the experiment class, the questions consisted of 10 items that were stated valid according to try out analysis. In the control class, the

researcher applied conventional teaching method to the students. Before starting to teach, the researcher prepared lesson plan and material for learning activity.

The researcher taught in control class on July 18th, 19th, and 20th, 2018. The teacher explained the material using conventional teaching method without giving variation or special treatment in learning process. After teaching for control class, the researcher gave post-test on July 21st, 2018 to identify the students' ability in reading comprehension.

Based on the statistical analysis and on the teaching learning process, it could be seen that Herringbone Pattern was able to answer the statement of the problems. The average score of pre-test in experiment class was 65.31 (*see page 39*) and the average score of control class was 65.62 (*see page 43*). The difference effect of experiment class and control class was on the treatment. The students of experiment class was taught by using Herringbone pattern, while the students of control class was taught by using conventional teaching method. According to the mean score of both groups, the mean score of post-test in experiment class is 90.94 (*see page 39*) and it was higher than the mean of control class that is 85.00 (*see page 43*). It means that there is a significant difference of score in reading that achieved by the students taught by using Herringbone pattern compared to those who taught by only using conventional teaching method. Thus, it can be concluded that the Herringbone pattern technique is effective in teaching reading comprehension.

It also means that teaching by using Herringbone pattern had advantages in learning process on news item text. First, the technique helped the students to understand more about the material. It can be seen also in previous study that conducted by Margareta, Ihksanuddin, and Syarif Husin (2014). They did a research about teaching reading descriptive text by using Herringbone pattern, especially for the students at eight grade of junior high school. The result of the research showed that teaching descriptive text by using Herringbone pattern is effective way to develop students reading comprehension. It can be proven from the increase of students' score in the class. In this research, the students' pre-test and post-test score also changes. It can be seen from students' score before the students taught by using Herringbone pattern and after the students taught by using Herringbone pattern.

Second, the technique helped the students to focus on their lesson. Also the students would not get bored and it made the classroom to be more cheerful. Based on McKnight (2010) Herringbone pattern is one of graphic organizer that can help students to understand the material easily where the pattern like a fishbone that can engage the students' interest in learning reading. Otherwise, students who were taught by using conventional teaching in control class feel bored and confused because the teacher only explained the material to the students and they wrote in their book. So, the material cannot be transferred to the students optimally.

In addition, since the teacher is a model in the class, everything happens in the class depends on the way of the teacher in creating the atmosphere in the class. Good atmosphere will have good influence in teaching and learning process. Not only the atmosphere but also good preparation and the choice of a good technique will create the interest of the students in learning process.