

## CHAPTER IV

### RESEARCH FINDINGS AND DISCUSSION

This chapter presents the research findings and the discussion based on the analysis of the data collected from the using *Storybird* Application in writing narrative text at SMA Negeri 1 Gedangan Sidoarjo. Related to the research findings, it can be seen from score between control group and experimental group that has differences in pre-test and post-test. The data were analyzed using SPSS version 14.0 for window.

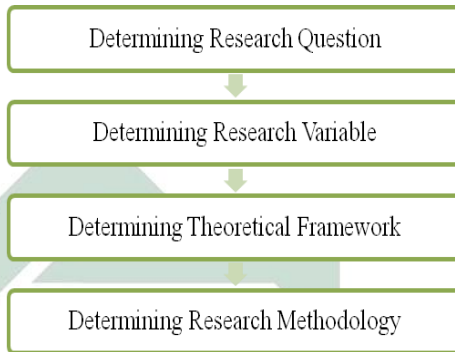
#### A. RESEARCH FINDINGS

##### 1. Preparation and Implementation of Research

This research is done through four stages of research procedure, that is stage of research preparation, stage of research implementation, stage of processing and data analysis, and discussion. The details of the stages are as follow:

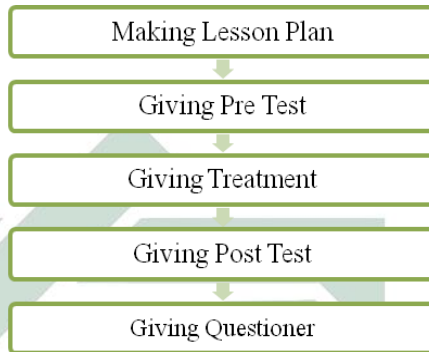
##### a. Stage of Research Preparation

In this stage, the researcher determined the research question, research variable, theoretical framework and research methodology that will be used. Besides, the researcher also determined research setting accordance with the characteristic that have been settled, determine and arrange research instrument to measure the variables studied.

**Figure 4.1 Stage of Research Preparation****b. Stage of Research Implementation**

This research has been done on September, 25 – October, 9 2017. The respondents of this research were 72 students of SMA Negeri 1 Gedangan. Those respondents were divided into 2 classes, X IPA 2 as the experimental group and X IPS 3 as the control group. The experimental group was taught using *Storybird* application and the control group was taught using conventional teaching (paper media). Before the researcher gave treatment, the researcher gave pre test to measure students' ability before treatment. After giving pre test, the researcher and teacher gave 3 times treatment. After treatment, the researcher gave post test to measure students result after giving difference treatment. Besides, the researcher also used observation checklist and questioner to make sure some things that affect the increased students' score and ability.

**Figure 4.2 Stage of Research Implementation**



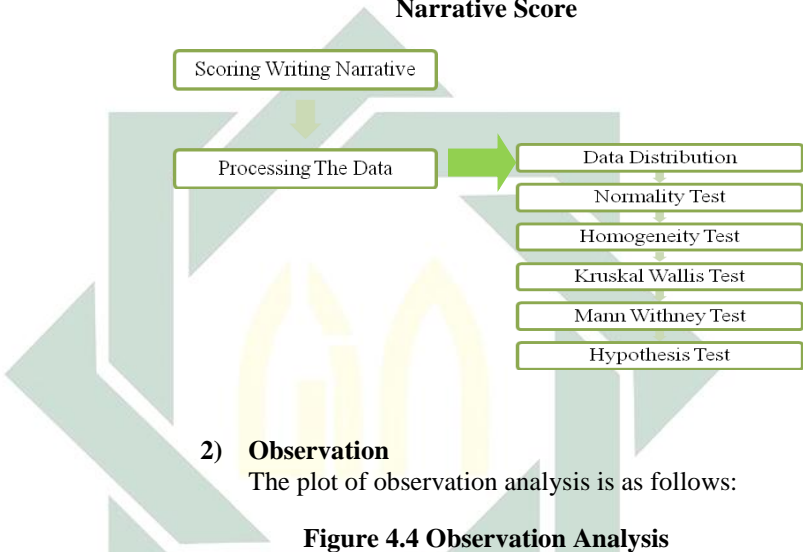
**c. Stage of Data Processing and Analysis**

After the data collection was completed, and then the scoring is based on writing score rubric that has been provided. In the writing scoring, the researcher measured 3 indicators of writing narrative text (*Setting, Characteristic and Plot, and Language*). Each aspect had score range from one to four. Scoring based on students' assignments, and then the researcher processed the data, which included the Normality test, Homogeneity test, Kruskal Wallis test, Mann Withney U test and Hypothesis test. Besides, the researcher also tested the validity and reliability of the questioner data that had been collected in the last meeting. The analyzing of all research result used numbers that are described with conclude the data based on the numbers processed by statistical methods through SPSS application version 14 for Windows 2007.

### 1) Narrative Writing Score

The plot of processing of narrative writing score is as follows:

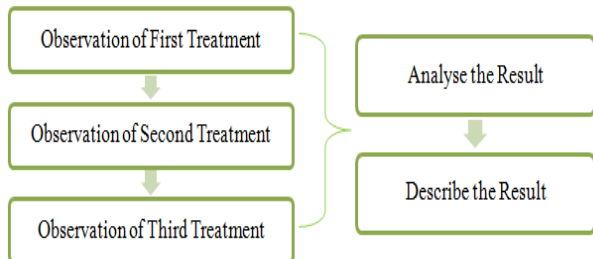
**Figure 4.3 Data Processing and Analysis of Writing Narrative Score**



### 2) Observation

The plot of observation analysis is as follows:

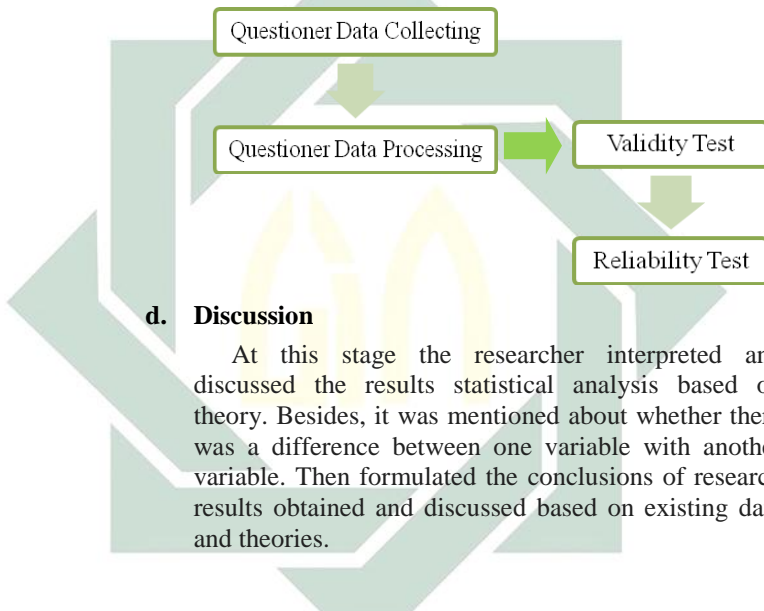
**Figure 4.4 Observation Analysis**



### 3) Questioner

The plot of questioner data collecting and analysis is as follows:

**Figure 4.5 Data Processing and Analysis of Questioner**



#### d. Discussion

At this stage the researcher interpreted and discussed the results statistical analysis based on theory. Besides, it was mentioned about whether there was a difference between one variable with another variable. Then formulated the conclusions of research results obtained and discussed based on existing data and theories.

## 2. Description of Pre Test and Post Test

### a. Data Distribution

#### 1) Table of Data Distribution

The data distribution frequencies of this research result are explained in calculation or

descriptive analysis consisting of 3 classes, namely:

- a) The first is the value of **N** or the amount of data as well as **valid** data and **missing** data.
- b) The second is **Central Tendency** (size of central tendency), this group calculated **mean** (average value), **median** (middle value), **mode** and **sum** (total value).
- c) The third is **Dispersion** (size of data spread) in this group which is calculated were **Standard Deviation, Variation, Range, Minimum and Maximum. Standard deviation** indicates the heterogeneity that occurred in a data that is studying. It can be said as an average of variability in a set of observational data. If the value of the standard deviation is greater, then average distance of each unit of data to the mean is also great. The purpose of **Variance** is to see the data diversity of an instrument made, so that the validity of the data or the variables can be assessed. If the number of variance is great, then the data are more diverse and if the number of variance is small, then the data are more homogenate. The **Minimum** indicates the lowest value of all variables. The **Maximum** indicates the highest value of all variables.

To know the frequencies of data distribution of Pre Test and Post Test in control class and experimental class, we can see at the table: Table 4.1, Table 4.2, Table 4.3, and Table 4.4

**Table 4.1 Frequency Distribution of Pre Test of Control Class**

		Statistics	
		CLASS	PRE TEST
N	Valid	36	36
	Missing	36	36
Mean		1,00	43,5011
Median		1,00	45,8150
Mode		1	49,98
Std. Deviation		,000	12,45306
Range		0	41,65
Minimum		1	24,99
Maximum		1	66,64

**Table 4.2 Frequency Distribution of Pre Test of Experimental Class**

		Statistics	
		CLASS	PRE TEST
N	Valid	36	36
	Missing	0	0
Mean		2,00	44,8894
Median		2,00	41,6500
Mode		2	41,65(a)
Std. Deviation		,000	8,96677
Range		0	33,32
Minimum		2	33,32
Maximum		2	66,64

a Multiple modes exist. The smallest value is shown

**Table 4.3 Frequency Distribution of Post Test of Control Class**

		<b>Statistics</b>	
		CLASS	POST TEST
N	Valid	36	36
	Missing	0	0
Mean		1,00	56,9217
Median		1,00	58,3100
Mode		1	58,31
Std. Deviation		,000	9,85619
Range		0	33,32
Minimum		1	33,32
Maximum		1	66,64

**Table 4.4 Frequency Distribution of Post Test of Experimental Class**

		<b>Statistics</b>	
		CLASS	POST TEST
N	Valid	36	36
	Missing	0	0
Mean		2,00	78,2094
Median		2,00	79,1350
Mode		2	74,97(a)
Std. Deviation		,000	9,81139
Range		0	33,32
Minimum		2	58,31
Maximum		2	91,63

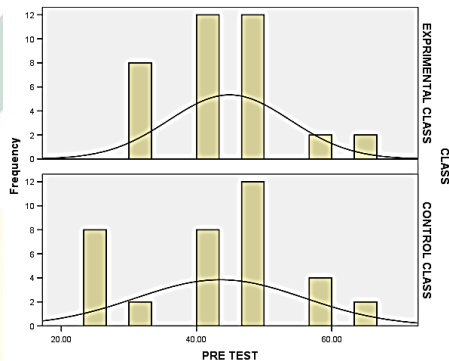
a Multiple modes exist. The smallest value is shown



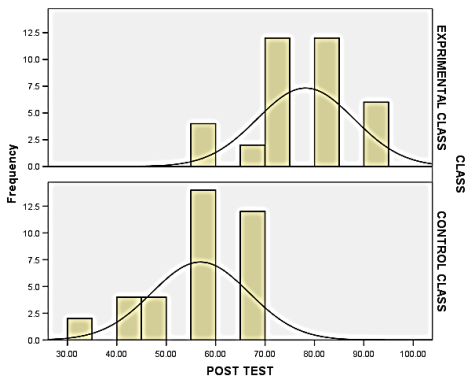
## 2) Histogram of Data Distribution

A histogram is a plot that shows the underlying frequency distribution (shape) of a continuous data set. The data histogram of Pre Test and Post Test of the research result is constructed with SPSS, it is shown below:

**Figure 4.6 Histogram of Pre Test**



**Figure 4.7 Histogram of Post Test**



Based on the “Pre Test” and “Post Test” diagrams above, the distributions of score for “experimental class” and “control class” had the **same shapes**. It shows that the forms and the distributions of the data **were same**. Then, the highest second peaks of each histogram **were not same**. It means there are median differences in each treatment. The first assumption of the test has been fulfilled, there are similarity of forms and disseminations. The next assumptions that will be tested are the “**normality**” and “**homogeneity**” of variance.

#### **b. Normality Test**

**Normality test** is a test that used to know the normality of research data. In this study, researcher calculated the normality test using SPSS using **Kolmogrov-Smirnov** and **Shapiro-Wilk** to find out whether the data of Pre Test and Post Test are normally distributed or not. The hypotheses of this test are:

H0: The value of Sig. (Significance) or probability value  $< 0.05$ , then the data is not normally distributed

H1: The value of Sig. (Significance) or probability value  $> 0.05$ , then the data is normally distributed.

The test results of the normality were shown in these tables below:

**Table 4.5 The Normality Test of Pre Test  
Tests of Normality**

	CLASS	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
PRE TEST	CONTROL CLASS	,199	36	,001	,898	36	,003
	EXPRIMENTAL CLASS	,197	36	,001	,883	36	,001

a Lilliefors Significance Correction

The table above is the result of **Test of Normality** with SPSS using **Lilliefors** and **Shapiro Wilk**. The values of Sig (p value) of **Lilliefors** are 0,001 in both of group  $< 0,05$ . It means that the data were **not normally distributed**. The value of Sig (p value) of **Shapiro Wilk** in control group is 0,003 is  $< 0,05$  and the value of Sig (p value) of **Shapiro Wilk** in experimental is 0,001  $< 0,05$ . Because all of value are  $< 0,05$  which means  $H_1$  was rejected, then the data were **not normally distributed**.

**Table 4.6 The Normality Test of Post Test  
Tests of Normality**

	CLASS	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	Df	Sig.
POST TEST	CONTROL CLASS	,278	36	,000	,831	36	,000
	EXPRIMENTAL CLASS	,204	36	,001	,881	36	,001

a Lilliefors Significance Correction

The table above is the result of **Tests of Normality** with SPSS using **Lilliefors** and **Shapiro Wilk**. The value of Sig (p value) of **Lilliefors** in control class is 0,000  $< 0,05$ . The value of Sig (p value) of **Lilliefors**

in experimental class is  $0,001 < 0,05$ . It means that the data were **not normally distributed**. The value of Sig (p value) of **Shapiro Wilk** in control group is 0,003 is  $< 0,05$  and the value of Sig (p value) of **Shapiro Wilk** in experimental is  $0,001 < 0,05$ . Because all of value are  $< 0,05$  which means H1 was rejected, then the data were **not normally distributed**.

### c. Homogeneity Test

Homogeneity tests are used to determine whether some of the population variants are the same or not. If the same population variant is called **homogeny** and if the variant of the population is not the same then it is called **heterogenic**. In this study, the researcher calculated the homogeneity test with SPSS using **Levene Statistic** to find out whether the data of Pre Test and Post Test are **homogeny** or **heterogenic**. The hypotheses of this test are:

H0: The value of Sig. (Significance) or probability value  $< 0.05$ , then the population variants are not homogeny.

H1: The value of Sig. (Significance) or probability value  $> 0.05$ , then the population variants are homogeny.

The test results of the homogeneity were shown in these tables below:

**Table 4.7 The Homogeneity Test of Pre Test  
Test of Homogeneity of Variance**

		Levene Statistic	df1	df2	Sig.
PRE TEST	Based on Mean	4,032	1	70	,049
	Based on Median	3,952	1	70	,051
	Based on Median and with adjusted df	3,952	1	68,854	,051
	Based on trimmed mean	4,135	1	70	,046

The table above is the result of test of homogeneity of variance in Pre Test with SPSS using Levene's test. The Levene's test value is shown of Sig (p value) is  $0,049 < 0,05$  which means H1 was rejected. It means that both of group variance is **not homogeny**.

**Table 4.8 The Homogeneity Test of Post Test  
Test of Homogeneity of Variance**

		Levene Statistic	df1	df2	Sig.
POST TEST	Based on Mean	,048	1	70	,827
	Based on Median	,371	1	70	,544
	Based on Median and with adjusted df	,371	1	67,470	,544
	Based on trimmed mean	,199	1	70	,657

The table above is the result of **Test of Homogeneity of Variance** in Post Test with SPSS using **Levene's test**. The **Levene's test** value is shown of Sig (p value) is  $0,827 > 0,05$  which means H1 was

accepted. It means that the both of group variance are **homogeny**.

#### d. **Kruskal Wallis Test**

Because the normality test on pre test and post test shows that the data are not normally distributed and homogeneity test shows there are variant differences between class (heterogeneous), then the **One-Way test** that used to test the effect of given treatment toward students' score is **Kruskal Wallis** test. In this study, the researcher calculated the **Kruskal Wallis** test with SPSS. To know statistically significant difference of rank, then need to see table Test Statistic. The P Value is indicated by Asymp. Sig. If the P Value < critical limits of research, then the decision of hypothesis is to accept H1 and reject H0. The hypotheses proposed are:

H0: there is no influence of given treatment to students' score

H1: there is no influence of given treatment to students' score.

The test results of the **Kruskal Wallis** on Pre Test were shown in these tables below (Table 4.10, Table 4.11, and Table 4.12) and the test results of the **Kruskal Wallis** on Post Test were shown in these tables below (Table 4.13, Table 4.14, and Table 4.15).

**Table 4.9 The Descriptive Statistic of Kruskal Wallis on Pre Test**

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
PRE TEST	72	44,1953	10,79681	24,99	66,64
CLASS	72	1,50	,504	1	2

**Table 4.10 The Ranks of Kruskal Wallis on Pre Test Ranks**

	CLASS	N	Mean Rank
SCORE	CONTROL CLASS	36	36,11
	EXPRIMENTAL CLASS	36	36,89
	Total	72	

**Table 4.11 The Test Statistic of Kruskal Wallis on Pre Test Test Statistics(a,b)**

	PRE TEST
Chi-Square	,027
Df	1
Asymp. Sig.	,871

a Kruskal Wallis Test  
b Grouping Variable: CLASS

Those three tables above are Kruskal Wallis output with SPSS showed that Mean Rank Score indicated the average rating of each treatment. In this study, the average grade of Pre Test in the experimental class is **slightly higher** than the control class. In this case, the value of P Value is  $0,871 > 0,05$  which means **H<sub>1</sub> is rejected**. In other words, **there is no influence** of given treatment to students' score.

**Table 4.12 The Descriptive Statistic of Kruskal Wallis on Post Test Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
POST TEST CLASS	72	67,5656	14,49931	33,32	91,63
	72	1,50	,504	1	2

**Table 4.13 The Ranks of Kruskal Wallis on Post Test Ranks**

	CLASS	N	Mean Rank
POST TEST	CONTROL CLASS	36	20,94
	EXPRIMENTAL CLASS	36	52,06
	Total	72	

**Table 4.14 The Test Statistic of Kruskal Wallis on Post Test Test Statistics(a,b)**

	POST TEST
Chi-Square	41,134
Df	1
Asymp. Sig.	,000

a Kruskal Wallis Test  
b Grouping Variable: CLASS

Those three tables above are Kruskal Wallis output with SPSS showed that Mean Rank Score indicated the average rating of each treatment. In this study, the average grade of Post Test in the experimental class is **higher** than the control class. In this case, the value of P Value is  $0,000 < 0,05$  which means **H1 is accepted**. In other words, **there is influence** of given treatment to students' score.

**e. Mann Withney U Test**

After the effectiveness difference between the given treatment in the control class and the experimental class was known, a further nonparametric **Mann Whitney test** was performed. The Mann-Whitney analysis was used to determine the magnitude of differences in control class and



experimental class at pretest and posttest. Hypothesis proposed at the time of pretest and posttest:

H0: there is no difference between the control group and the group experiment.

H1: there is a difference between the control group and the group experiment.

The Mann-Whitney used 95% confidence level with 5% real level. Results of data analysis using Mann Whitney U Test technique at the time before treatment was given (pretest) in the experimental group and the control group is as following:

**Table 4.15 Ranks of Mann Withney U on Pre Test Ranks**

	CLASS	N	Mean Rank	Sum of Ranks
PRE TEST	CONTROL CLASS	36	36,11	1300,00
	EXPERIMENTAL CLASS	36	36,89	1328,00
	Total	72		

Table above indicated Mean Rank in each class. The mean rank of control class is 36,11 slightly lower than mean rank of experimental class is 36,89. To know statistically significant difference of rank, then need to see table Test Statistic.

**Table 4.16 Test Statistic of Mann Withney U on Pre Test Test Statistics(a)**

	PRE TEST
Mann-Whitney U	634,000
Wilcoxon W	1300,000
Z	-,163
Asymp. Sig. (2-tailed)	,871

a Grouping Variable: CLASS

The table above showed the value of Mann Whitney U is 634,000 and the value of Wilcoxon W is 1300, 000. If it is converted to the value of Z is -0,163. Sig value or P value is 0,871 > 0.05. If the value of P > critical limit 0,05 which means H1 is rejected. In other words, **there is no significant** difference between control class and experimental class

The results of data analysis using Mann Whitney U Test technique after being given treatment (posttest) in the experimental group and group controls are as follows:

**Table 4.17 Ranks of Mann Withney U on Post Test**

Ranks				
	CLASS	N	Mean Rank	Sum of Ranks
POST TEST	CONTROL CLASS	36	20,94	754,00
	EXPRIMENTAL CLASS	36	52,06	1874,00
	Total	72		

Table above indicated Mean Rank in each class. The mean rank of control class is 20,94 lower than mean rank of experimental class is 52,06. To know statistically significant difference of rank, then need to see table Test Statistic.

**Table 4.18 Test Statistic of Mann Withney U on Post Test Test Statistics(a)**

	POST TEST
Mann-Whitney U	88,000
Wilcoxon W	754,000
Z	-6,414
Asymp. Sig. (2-tailed)	,000

a. Grouping Variable: CLASS

The table above shows the value of Mann Withney U is 88,000 and the value of Wilcoxon W is 754,000. If it is converted to the value of Z is -6,414. Sig value or P value is 0,000 < 0.05. If the value of P < critical limit 0,05 which means H1 is accepted. In other words, **there is significant** difference between control class and experimental class.

#### f. Hypothesis Test

Based on both Kruskal Wallis test and Mann Withney U test, it can be concluded that the hypothesis Ha was accepted. It means that the use of *Storybird* application in learning narrative text writing has effectiveness in improving students' writing skill and score.

### 3. Description of Observation

In the implementation of this research, the researcher also uses observation checklist as a research instrument to know the student's response from all student activities during the learning process. In the treatment stage of this study, there is an observer who has assisted the researcher

in observing the condition or response of the students during the learning. In general, the implementation of learning in the control class and the experimental class has little difference. The results of the observation of three treatments are as follows:

**Table. 4.19 The Result of Observation in First Treatment**

<b>Observed Aspects</b>	<b>Control class</b>	<b>Experimental class</b>
Students prepare to receive lessons.	Student did not prepare themselves to receive lesson	Student prepared themselves to receive lesson
Students pay attention to teacher's explanation during learning process	<ul style="list-style-type: none"> <li>- Students were enthusiast in receiving lesson.</li> <li>- Students pay attention and took some note of teacher's explanation.</li> </ul>	
Students ask questions with teachers	<ul style="list-style-type: none"> <li>- Students asked some question from what they did not know yet.</li> <li>- Students asked some question of teacher explanation that they did not understand yet.</li> </ul>	
Students observe images shown by the teacher	<ul style="list-style-type: none"> <li>- Students observed image shown by the teacher.</li> <li>- Students were able to relate images with learning material.</li> <li>- Students were more active with images shown by teachers</li> </ul>	
Students discuss with their friends	- Students discussed in doing the task	- Students discussed in doing the task

	<p>given by the teacher <b>pass the specified time limit.</b></p> <ul style="list-style-type: none"> <li>- Students <b>are bit noisy</b> when discussing in doing the task.</li> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>	<p>given by the teacher <b>on time.</b></p> <ul style="list-style-type: none"> <li>- Students <b>are not noisy</b> when discussing in doing the task.</li> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>
Students work in groups	<ul style="list-style-type: none"> <li>- Students were not responsible for their task</li> <li>- Students were not orderly in doing their task</li> </ul>	
Students do the tasks the teacher gives	Students did not finish their tasks in accordance with teacher's instructions.	Students did their tasks in accordance with teacher's instructions.
Students complete learning activities with orderly and calm	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students followed a quiet learning evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students follow a quiet learning evaluation.</li> </ul>

**Table. 4.20 The Result of Observation in Second Treatment**

<b>Observed Aspects</b>	<b>Control class</b>	<b>Experimental class</b>
Students prepare to receive lessons.	Student prepared themselves to receive lesson	
Students pay attention to teacher's explanation during learning process	<ul style="list-style-type: none"> <li>- Students were enthusiast in receiving lesson.</li> <li>- Students pay attention and took some note of teacher's explanation.</li> </ul>	
Students ask questions with teachers	<ul style="list-style-type: none"> <li>- Students asked some question from what they did not know yet.</li> <li>- Students asked some question of teacher explanation that they did not understand yet.</li> </ul>	
Students observe images shown by the teacher	<ul style="list-style-type: none"> <li>- Students observed image shown by the teacher.</li> <li>- Students were able to relate images with learning material.</li> <li>- Students were more active with images shown by teachers</li> </ul>	
Students discuss with their friends	<ul style="list-style-type: none"> <li>- Students discussed in doing the task given by the teacher <b>pass the specified time limit.</b></li> <li>- Students <b>are bit noisy</b> when</li> </ul>	<ul style="list-style-type: none"> <li>- Students discussed in doing the task given by the teacher <b>on time.</b></li> <li>- Students <b>are not noisy</b> when discussing in doing the task.</li> </ul>

	<p>discussing in doing the task.</p> <ul style="list-style-type: none"> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>	<ul style="list-style-type: none"> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>
Students work in groups	<ul style="list-style-type: none"> <li>- Students were not responsible for their task</li> <li>- Students were not orderly in doing their task</li> </ul>	
Students do the tasks the teacher gives	Students did their tasks in accordance with teacher's instructions.	
Students complete learning activities with orderly and calm	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students followed a quiet learning evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students follow a quiet learning evaluation.</li> </ul>

**Table. 4.21 The Result of Observation in Third Treatment**

<b>Observed Aspects</b>	<b>Control class</b>	<b>Experimental class</b>
Students prepare to receive lessons.	Student prepared themselves to receive lesson	
Students pay attention to teacher's	<ul style="list-style-type: none"> <li>- Students were enthusiast in receiving lesson.</li> <li>- Students pay attention and took some</li> </ul>	

explanation during learning process	note of teacher's explanation.	
Students ask questions with teachers	<ul style="list-style-type: none"> <li>- Students asked some question from what they did not know yet.</li> <li>- Students asked some question of teacher explanation that they did not understand yet.</li> </ul>	
Students observe images shown by the teacher	<ul style="list-style-type: none"> <li>- Students observed image shown by the teacher.</li> <li>- Students were able to relate images with learning material.</li> <li>- Students were more active with images shown by teachers</li> </ul>	
Students discuss with their friends	<ul style="list-style-type: none"> <li>- Students discussed in doing the task given by the teacher <b>pass the specified time limit.</b></li> <li>- Students <b>are bit noisy</b> when discussing in doing the task.</li> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>	<ul style="list-style-type: none"> <li>- Students discussed in doing the task given by the teacher <b>on time.</b></li> <li>- Students <b>are not noisy</b> when discussing in doing the task.</li> <li>- Students discussed and finished the task according to the teacher's direction</li> </ul>
Students work	- Students were responsible for their task	



in groups	- Students were orderly in doing their task	
Students do the tasks the teacher gives	Students did their tasks in accordance with teacher's instructions.	
Students complete learning activities with orderly and calm	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students followed a quiet learning evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>- Students could deduce learning outcomes.</li> <li>- Students follow a quiet learning evaluation.</li> </ul>

Based on those three observation result, it proved that there are differences of students' responses between experimental class and control class. The differences are showed in how students did their assignments. Students of experimental class more orderly and on time to finish their assignment

#### 4. Description Questioner

##### a. Questioner Data Collecting

In this study, researcher also used questioner as a research instrument to support other instruments. In this questioner, researcher provided 15 items that divided in 2 aspects. The first aspect is English teaching learning process in SMA Negeri 1 Gedangan, there were 4 question items. In the aspect, researcher asked about *the students' opinion about English course and writing media used*. The second aspect is implementation of *Storybird* application in writing teaching learning process, there were 11 question

items for this aspect. In the aspect, researcher asked about *Students' Knowledge of Storybird Application, Students Responses and Need Toward Implementation of Storybird in Writing Teaching Learning Process.*

The totals of respondents were 36 students of Experimental class who were taught using *Storybird* application. The implementation of the data collection was exercised on October 9, 2017. Furthermore, the questioner data that hhave already obtained was calculated using the *Microsoft Excel*. After the questioner data had been calculated, the data was tested for the validity and the reliability of the data using *SPSS version 14*.

## **b. Questioner Data Processing**

### **1) Validity Test**

Validity test in this research was done by factor analysis using tool help SPSS. The validity test is performed to find out whether the statement on questionnaires is valid or not. In this validity test of the questionnaire, the researcher used Pearson correlation test. The declared statement is valid if  $r\text{-count} > r\text{-table}$ . The value of Degree of Freedom (df) used is  $N-2$ , in this data  $36 - 2 = 34$  with r value of table 2 tail on sig. 0.05, then the value obtained is 0.3291. The result of validity test can be seen in table 4.21 as the following:

Table 4.22 The result of validity test

Items		r – count	r – table	Interpretation
S1	Pearson Correlation Sig. (2-tailed) N	,819 ,000 36	>0,3291	Valid
S2	Pearson Correlation Sig. (2-tailed) N	,875 ,000 36		Valid
S3	Pearson Correlation Sig. (2-tailed) N	,549 ,001 36		Valid
S4	Pearson Correlation Sig. (2-tailed) N	,566 ,000 36		Valid
S5	Pearson Correlation Sig. (2-tailed) N	,631 ,000 36		Valid
S6	Pearson Correlation Sig. (2-tailed) N	,566 ,000 36		Valid
S7	Pearson Correlation Sig. (2-tailed) N	,819 ,000 36		Valid
S8	Pearson Correlation Sig. (2-tailed) N	,631 ,000 36		Valid
S9	Pearson Correlation Sig. (2-tailed) N	,432 ,009 36		Valid
S10	Pearson Correlation Sig. (2-tailed) N	,857 ,000 36		Valid
S11	Pearson Correlation Sig. (2-tailed) N	,423 ,010 36		Valid
S12	Pearson Correlation	,857		Valid

	Sig. (2-tailed) N	,000 36		
S13	Pearson Correlation Sig. (2-tailed) N	,631 ,000 36		Valid
S14	Pearson Correlation Sig. (2-tailed) N	,861 ,000 36		Valid
S15	Pearson Correlation Sig. (2-tailed) N	,861 ,000 36		Valid

Based on the results of the calculation, the r-count value obtained was greater than the r-table value and there is no item was negative then the fifteen questions were valid. It means that the questionnaire was valid as a research instrument.

## 2) Reliability Test

Reliability test in this research was done by factor analysis using tool help SPSS. The reliability test is performed to find out whether the questionnaires are consistency or not. The declared statement is reliable if r-count (Corrected Item – Total Correlation) > r-table. The value of Degree of Freedom (df) used is N-2, in this data  $36 - 2 = 34$  with r value of table 2 tail on sig. 0.05, then the value obtained is 0.3291. The result of reliability test can be seen in table 4.22 as the following:

**Table 4.23 The result of validity test**

<b>Item-Total Statistics</b>				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	67,28	108,892	,831	,949
Q2	67,97	111,113	,838	,948
Q3	67,22	117,606	,519	,952
Q4	67,06	121,540	,557	,952
Q5	66,53	119,571	,560	,951
Q6	67,06	121,540	,557	,952
Q7	67,28	108,892	,831	,949
Q8	66,53	119,571	,560	,951
Q9	66,53	122,199	,383	,953
Q10	67,97	111,113	,838	,948
Q11	68,42	119,564	,370	,954
Q12	67,97	111,113	,838	,948
Q13	66,53	119,571	,560	,951
Q14	67,17	113,629	,850	,948
Q15	67,17	113,629	,850	,948

Based on the results of the calculation, the r-count value obtained was greater than the r-table value and there was no negative item then the fifteen questions were reliable. It means that the questionnaire was reliable as a research instrument.

### 3) Questioner Result

The questioner result was calculated using *Microsoft excel 2007*. The questioner result was performed to show the total responses in each

statements of the questioner. To facilitate understanding, the results have been presented in table as below:

**Table 4.24 Questioner Result**

Aspects	Statement Number	Strongly Agree	Agree	Somewhat Agree	Disagree
<b>Writing Teaching Learning Process</b>	1	12	9	7	8
	2	9	9	12	6
	3	9	12	8	7
	4	24	9	2	1
	<b>TOTAL</b>	<b>56</b>	<b>39</b>	<b>24</b>	<b>25</b>
<b>Implementation Of Storybird In Writing Teaching Learning Process</b>	5	1	2	5	27
	6	22	12	1	1
	7	22	12	1	1
	8	21	10	3	2
	9	19	11	3	3
	10	19	12	2	3
	11	18	13	3	2
	12	14	13	5	4
	13	12	16	4	4
	14	23	11	2	0
	15	21	11	4	0
	<b>TOTAL</b>	<b>192</b>	<b>123</b>	<b>33</b>	<b>47</b>

Based on the result table, the first to second statements that represented first aspect showed that most students loved English course but did not English writing course. In the third and fourth

statements explained that their teacher almost seldom used other media except text book and dictionary. Sometimes, teacher used Power Point Presentation to explain the material. Therefore, the students needed a new and interesting media to help them in learning English, especially writing.

The second aspect, the fifth statements explains that most students have not know about *Storybird* application before this treatment. The sixth to eighth statements, showed that most students feel happy and enthusiast toward using *Storybird* application in learning writing. The ninth to fourteenth statements showed that most students gave positive responses toward the features of *Storybird* application. The fifteenth statements showed that students need toward using *Storybird* application in teaching learning process of narrative text as an alternative media. They need new media so they are not easily bored.

From the result above, it can be seen that more than 50 % of the students responded that *Storybird* application can motivate them in writing. The use of *Storybird* application was effective to motivate the students, helping them to write narrative text in English. It also shows that dictogloss is understandable and fun for them. *Storybird* application helped them to find and generate their idea in making a narrative text. *Storybird* application also helped students in understanding what is narrative text and its' generic structure.

## 5. Documentation

There are 4 documentation types of the research, such as: *students' attendance list, students' pre test and post test score, students' portfolios and picture of research activity*. All of the documentation types can be seen in appendices.

## B. DISCUSSION

The research revealed that *Storybird* application succeeded in improving the students' writing ability in narrative text. It was proved by finding of the research that there significant differences of students' score improvement between control class and experimental class. Based on pre test score of control class (43,501) and experimental class (44,889), there is no significant differences in their writing score. Whether, based on post test that was done after treatment, there is a significant difference between control class students (56,922) and experimental class students (78,209). The score improvement of control class between pre test and post test was for about 30%, whether the score improvement of control class between pre test and post test was for about 74%. It means that the significant improvement scores were obtained by experimental class. In other words, the *Storybird* application can help students to improve students' writing ability and score in narrative text.

Besides that, the result of learning process observation in class and students interview by questioner in experimental class showed that the students were enthusiast, happy and motivated toward using *Storybird* application in English writing. Students felt helped by this application to practice in writing more. They also suggested that *Storybird* application can be alternative media in some writing assignment in order to they are not feel bored. Because of *Storybird* application can be accessed in Smartphone and they can invite their friend to collaborate



writing, they feel like access social media while practice writing.

From those explanations, the researcher decided to stop this research because the implementation of *Storybird* application was running well. It can be seen in the research findings and the findings explanation above.

