

## CHAPTER III

### RESEARCH METHOD

This chapter describes the features design of the fundamental research methods which were applied by the researcher. Inside it, there were any cases would be explained, they were *research design, population and sample, research instruments, data collection technique, and data analysis technique.*

#### A. Research Design

This study used quasi-experimental that applied to measure how much the effect of EdPuzzle on students' ability to write recount text. The experimental study was held to make some investigation to the *cause and effect* relationship with two different groups: control group and experimental group<sup>60</sup> and the investigators accurately manipulate and control the conditions which establish the events in which they were interested.<sup>61</sup>

The experimental group would be given the treatments, but before it, the researcher would give pre-test for both groups to determine how far the students' ability in writing recounts text. Afterwards, the students would be given treatments twice and followed by post-test.

In indicate the treatments, the random assignment would be used by the researcher, it was attended to choose which class to be control group, and another became the experimental group. It was meaning to know about the

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<sup>60</sup>Suryabrata and Sumadi, *Metode Penelitian* (Jakarta: PT Raja Grafindo Persada, 2011), 91.

<sup>61</sup>Sutrisno Hadi, *Metodologi Research*, 4 (Yogyakarta: Yayasan Penerbit Fakultas Psikologi UGM, 1985), 78.

dissimilarity result of both of the groups.<sup>62</sup> The following table provides information of how this research runs.

<b>Table 3.0 Research Procedure</b>		
	<b>Experimental Group</b>	<b>Control Group</b>
<b>Pre-test</b>	Yes	Yes
<b>Treatment 1</b>	Applying EdPuzzle in writing a recount text (teaching Definition of recount text)	Applying conventional method
<b>Treatment 2</b>	Applying EdPuzzle in writing a recount text (teaching the generic structure)	Applying conventional method
<b>Treatment 3</b>	Applying EdPuzzle in writing a recount text (teaching the language features)	Applying conventional method
<b>Post-test</b>	Yes	Yes

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<sup>62</sup>Ibid., 198.

In this quasi-experimental study, there was Scientific investigation which was done in manipulation on independent variable.<sup>63</sup> In this study the researcher would use two classes to be tested. The first class would become the control group, and another one would become the experimental group. The experimental group was conditioned to use flip learning method, while the control group was using the habitual method used by the teacher.

Depend on statement of Asmadi, the experimentation was done to compare the two classes in which the control group was generally taught by the conventional or usual procedure, and the experimental group was used the new method of learning.<sup>64</sup> Both groups would be treated with the same procedure, and given pre-test and post-test before and after the treatments with the same sets of the test.

In this study, the researcher applied cluster sampling technique by taking two classes in population. Afterward, the experimental and the control group were decided by the researcher. The pre-test would be given to both groups to find out their ability in recount text before treatments. This would be a measurement to both groups about how good they arrange sentences. Later, the researcher gave twice of treatments to experimental group. The different classes would be taught in conventional method without EdPuzzle and the experimental group would be taught by using EdPuzzle.

## **B. The Presence of the Researcher**

In this study, the researcher played role as the teacher and data collector. The researcher gave the pre-test, treatment, and the post-test, so she mixed up directly with the research object (learners). She also was a full observer on the process of

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<sup>63</sup>L. R. Gay, *Educational Research Competencies for Analsis & Application*, 2nd ed. (Ohio: A Bell & Howell Company, n.d.), 298.

<sup>64</sup>Asmadi Alsa, *Pendekatan Kuantitatif Kualitatif Dalam Penelitian Psikologi* (Yogyakarta: Pustaka Pelajar, 2004), 274.

E-learning implementation. In addition, this research had been known and permitted by the head master and the research object.

### **C. Research Variable**

In this experimental study, both of dependent variable and independent variable had clear dissimilarity. The explanation about how the two kinds of variable associated one to another, there was a cause-effect relationship in experimental study.

Dependent variable was the effect derived from treatments from EdPuzzle learning. Meanwhile, Independent variable was similar to the *cause* which means that the media or the materials became the cause of the impact given after the treatments.<sup>65</sup> It could be concluded that dependent variable was the effect on recount writing which appears after treatment using EdPuzzle and independent variable was the EdPuzzle itself. In data analysis, the researcher would calculate the mean and standard deviation to know about how effective EdPuzzle in use.

### **D. Population and Sample**

#### **1. Population**

The population of this study was the learners on SMPN 1 Mojoanyar which was located on Jln Raya Mojoanyar no.2 Mojoanyar. The school contact number is (0321) 510062. For the details, there were four classes for the entire class grade. In every class, there were 34 students. The classes which the researcher applied in the research were two classes comprising VIII A and VIII B.

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<sup>65</sup>Latipun, *Psikologi Eksperimen* (Malang: UMM Press, 2002), 124.

## 2. Sample

The samples of this research were two classes: VIII A and VIII B. The reason why the researcher take those classes as a sample because both of those classes have resembled ability in English, this statement was taken from the recommendation of the teacher on that school.

In addition, since this was a quasi-experimental research, the researcher used a *purposive sampling*. She gave assignment to every eighth grade of the classes, and the results two classes ;VIII A and VIII B would be the sample, both of the class have same total students; 34 students for each and they have resembled competence in English. The researcher applied purposive sampling because he could not randomize the students to be the sample in the population to represent in the study. The class would be separated into two groups, one would be the experimental group, and another would be controller group.

### E. Research Instrument

In the research, the instruments were used to obtain the data from the field. Because of this study was Quasi-experimental research, it was belonging to quantitative research. The researcher needed do some tests as the instruments to collect data in the form of numbers or in quantitative way. As the instrument of research, certainly the test needed to be assessed its validity and reliability. When the instruments have proven to be valid and reliable then it could be used to collect data needed in the field.

In the pre-test and post-test, the test as the instrument was used to be the research data collector, then the test would be measured by the writing rubric was taken from the thesis of

Si Putu Agung Pertiwi Dewi<sup>66</sup> (*see Appendix 1*). The instrument in phase pre-test and post-test and the rubric was known reliable and good to apply to collect data, when the result of Pearson product moment calculation showed the score was higher than that in the table. The instrument used to measure pre-test and post test was the same rubric as in Appendix 1.

### 1. Validity of the Test

The data was obtained in the field could be called valid if derived from valid test as well. The validity concept was the test measure what needs to be measured.<sup>67</sup> If the component validity namely content validity, face validity, and construct validity were included and met, the test could be considered valid.

#### a. Content Validity

The substance of what to measure must match the test was the content validity representation. For example, we wanted to assess speaking, but the test was not valid in its content, because the form of the test was not in the form of paper-based test with multiple choices. The data resulted from the invalid test could not represent what to assess from the individuals.<sup>68</sup>

If the test was proven to assess what skill should be assessed during the treatment, the test instrument could be said validated, for example, reading skill in recount text. The researcher cannot go beyond this boundary because the assessment must be related with the materials which in learning process.

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<sup>66</sup>Si Putu Agung Pertiwi Dewi, "Kemampuan Menulis Recount Text Dengan Menggunakan Teknik Picture Series Pada Kelas Viii Di Smp Angkasa Kuta Badung" (Universitas Udayana, 2013), 42–47.

<sup>67</sup>H. Douglas Brown, *Principles of Language Learning and Teaching*, 5th ed. (White Plains, NY: Pearson Longman, 2007), 448.

<sup>68</sup>*Ibid.*, 449.

And the material also must be appropriate with syllabus and content standard.

This research used the valid instrument because the content of the instrument appropriated with the content will be measured. Grammar, punctuation, developing idea, the correlation between each paragraph and each sentence was the content will be measured. This research used the rubric from Brown which has all of that content. According to brown, there were several aspects must be measured from writing, they are developing idea, coherent, and the writing rules (grammar and punctuation)

## 2. Reliability of the Test

The data research could be considered reliable or not when there was a similarity in different periods. A test could be said as reliable if the test could show the similar result in period time.<sup>69</sup> So if the test was reliable, the test was used in the research could be used several times to measure the same data and would result the same data. The measurement of this test was using international rubric by Rebecca L. Oxford.<sup>70</sup> It meant that the test instrument was reliable.

These researches instrument also an international instrument because the instrument was ever used in many researches without change the base of the instrument.

## F. Data Collection Technique (Research Procedure)

The try-out test would not be held as the first step of data collection to examine the instruments' validity and reliability, because the tool used to be measure was an international rubric which was often use as a reference and have actual similar result. Then it was directly implement the

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<sup>69</sup>Ibid., 501.

<sup>70</sup>Rebecca L. Oxford, *Language Learning Styles and Strategies*, 178.

pre-test, treatments and ended by post-test. The Pre-test was conducted by giving an assignment to the students to write a recount text. The treatment was applied 3 times. The first treatment, teacher gave material about the definition of recount text. The second treatment teacher gave material about generic structure and the third teacher gave material about language features. The Post-test was conducted by giving an assignment to the students to write a recount text. The form of scores of pre-test, treatments, and post-test were the data collected in quasi-experimental research. The differences between pre-test and post-test was then calculated with the formula of independent t-test two tails by using Pearson correlation product moment.

#### Ø Detail of Research procedure

##### 1. Pre-test

After getting two classes, it was divided into two groups; experimental group was taught using Edpuzzle media in teaching writing recount text and Control group was taught using conventional media. Then, researcher gave pre-test to experimental group and control group. The purpose of the pre-test was to determine students' ability for their writing in recount text. The result of this test between experimental group and control group was used to identify the differences students' writing ability in recount text before treatment.

##### 2. Treatment Implementation

After giving the pre-test for both of classes, then the next steps were held by giving treatment. Edpuzzle media was given to experimental group and the control group was taught using conventional media (LKS). The researcher was given three times treatments. This action had a purpose to get an accurate result of the Edpuzzle media. This research was taken a five times class meeting for both of classes.

##### a. Experimental class

The experimental class was getting treatment with Edpuzzle as a media of learning to write recount text. The



steps of Edpuzzle media in teaching writing recount text were:

### 1. Outside the Classroom.

- Researcher shared a video teaching about recount text explanation through Edpuzzle media that the researcher has been chose. Students were able to watch the video by their laptop, smartphone or computer.
- Students watched the video at home or wherever place that the students comfort to study in. They can also study individually or peers.
- Students gave some exercise through the video about definition of Recount text, generic structure, and language features.

Note: to make sure that the students watched the video by themselves, teacher gave the students task that could be fulfilled by watching the video that have been shared in Edpuzzle. When in the class, teacher asked the students with some question about the video that have been shared.

### 2. Inside the Classroom.

#### Ø Before Used Edpuzzle

- Teacher gave the tutorial to sign up in Edpuzzle website.
- Teacher gave the opportunity to students who wanted to ask about using Edpuzzle website.

#### Ø After Used Edpuzzle

- Teacher asked what they had learned from the video and corrected the answer that the student had to answer in the video with the class.
- Teacher asked them whether there was something that they did not understand by the video.
- Teacher gave students a recount text.
- Teacher divided the students into groups contains of 4 to 5 students.

- In group, students identified and explored the recount text of the paragraph to get the generic structure of the text.
- Using their own words, students wrote the important information from the text.
- This activity continued till the end.
- Teacher and students discussed the content of the text. Teacher can point one of the groups to share their notes about the text. Teacher controlled and provided the right answer while checking the answer.
- Teacher evaluated the learning process.

b. Control class

In the control class did not receive any treatment and the learning process was done using a conventional learning. The lesson plans for the control class were:

- Teacher explained the lesson in front of the class using conventional media.
- Teacher gave a recount text to students.
- Teacher asked the students to identify about generic structure of recount text
- Students collect the work.

3. Post-test

After the treatments, researcher was held post-test that would be given to the experimental group and the controlled group. The purpose of this test was to know the students' achievement of both classes after getting the treatment.

After got the pre-test and post-test from both of classes, the researcher did the data analysis to found out whether students' writing ability in recount text was an improvement or not.

## G. Data Analysis Technique

There were some steps used in this research in calculating the score of the students, they are:

## 1. Data Showing (Descriptive Statistic)

The score of the data would be shown by using this following table.

### Example of Scoring Table

**Table 3.1 Description of Recount Text Learning Result Example**

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Post-test Control						
Post-test Experiment						
Pre-test Control						
Pre-test Experiment						
Valid N (list wise)						

## 2. Analysing Data by SPSS 23

After showing data with descriptive statistic, then researcher would analyse data by using inferential statistic to test hypothesis of this research. Inferential statistics were divided into 2, parametric and non-parametric. If the data that had been taken satisfies some assumptions such as normality test and homogeneity test then the parametric statistic could be used, if the data did not meet the assumption then non-parametric statistic would be used.

### a. Normality test

The data would be analysed using IBM SPSS 23. The Shapiro-wilk test was used in this analysing process. According to Sudarmanto, the result of Shapiro-wilk test could be analysed by using the score of Asymp. Sig. (2-tailed) which compared with Alpha

Score.<sup>71</sup> The data interpretation, if the Asymp, Sig. had score more than Alpha score; it was mean that the data was normally distributed.

#### **b. Homogeny Test (Levene's Test)**

In this study, a Levene's Test was carried out to check the data Homogenous by using IBM SPSS V23. To know the result of the data was homogeny or not, it could be seen from the significant score of each variable. When the score of *sig.* was more than 0,05 or 5% (*Alpha*), it could be concluded that the data was homogeny.

#### **c. Hypothesis Test**

The hypothesis test was provided by using paired T-test to investigate the effect of EdPuzzle and LKS Media on the learning result. Then independent sample T-test was used to investigate the differences between both of that media.<sup>72</sup>

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<sup>71</sup>R. Gunawan Sudarmanto, *Statistik Terapan Berbasis Komputer: Dengan Program IBM SPSS Statistik 19* (Jakarta: Mitra Wacana Media, 2013), 130.

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