CHAPTER III

METHOD

3.1 Research Design

This research can be classified as a quasi-experimental research type. The research employed the pre-test and post-test design. It was an intact group pre-test – post-test design involving a group of students in the experimental group and control group. The experimental group was given the special treatment using video, but control group was given the conventional technique (without video). The researcher used quantitative research because he compared groups using statistical analysis and collected data from the sample using an instrument with preset questions and responses. Furthermore, the writer chose quasi-experimental as the design of the research. As stated by (Creswell, 2012),the design used when the writer cannot artificially create groups for the experiment is called quasi-experimental design. That is the design that was used by the writer because the writer used the existing class in the school without forming a new group of experiments.

3.2 Population and Sample

The population of the study was 94 students from the fifth grade of Anuban Chumchon Phukradueng School. They are 5/1, 5/2, 5/3, 5/4. The writer only took two classes that were 5/2 consists of 22 students and 5/3 consists of 22 students. The reason researcher only took two class because both of the class has the same level of English ability. Only 5/4 who has the high ability in English because they are student in EP (English Primary) class. The sample of this research is 44 students, which is divided into 2 classes, 5/2 as the experimental class and 5/3 as the controlled class. Those classes were chosen based on the permission of the school which allowed to conducted study in a class where the writer was teaching during Internship and community service program in Thailand. And also the researcher got the result after interview with the teacher in there, so the teacher in there said that 5/2 and 5/3 has the same level. Which means that both of the class has lower

background knowledge, especially in English. That's make the researcher put more effort to finish this research.

3.3 Research Instrument

Since the study was quasi-experimental, the instruments to collect the data were a pre-test and a post-test. The collected data were the scores obtained from the pre-test and the post-test of both the control group and the experimental group. The scores from the pre-test were used to see the vocabulary ability of both classes before the treatment. On the other hand, the scores from the post-test were used to measure whether the implemented method affected the experimental group or not.

In this research study, the vocabulary test served as the research instrument. The vocabulary test was held twice, in the pre-test and the post-test. It was used to reveal the significant difference in the vocabulary ability between the 5/2 who were taught by using video and 5/3 who were not. The test used fill in the blank and match with the correct answer. It consists of 25 items to assess the student's vocabulary that consists of pre-test and post-test. Form of pre-test and post-test contain 25 questions. Every single word in pre-test and post-test is same. Heaton (2005: 45) suggests how to make vocabulary test well, those are:

1. Each option should belong to the same word class as the stem.

2. The key answer and distractors should be at the same level of difficulty.

3. All options should be approximately at the same length.

In formulating the test instrument, the points to be considered are the relevance of the test instruments to the purpose of the study, and the relevance of the test instruments to the curriculum. The test was intended to measure students' vocabulary ability before and after the treatment. The vocabulary tests were made based on the purpose of this research and consider on background knowledge of the students for the fifth grade of the Elementary school in the first semester. The lesson plan for the fifth grade elementary school students in the vocabulary mastery was taken as the considerations in formulating test. In making the test, the researcher took resource related with purpose in lesson plan who exist in the movie clips.

3.4 Validity and Reliability for test Instrument

3.4.1. Validity

An instrument is considered valid if it is able to test what should be tested. It can explain the data from the variables which are accurately researched. A valid instrument refers to the extent to which an instrument measures what is supposed to measure (Wiersma et al., 2009).Validity criteria used in this study were content validity and construct validity. Before instruments tested to students, they were consulted with expert (the supervising lecturer) whether the instruments were appropriate or not to measure the research variables.

The vocabulary validity test employed content validity. According to (Wiersma et al., 2009), content validity is the process of how the test establishes the representativeness of the items in a certain domain of skills, tasks, knowledge, and other aspects that are being measured. It means the test was developed in reference to the lesson plan fifth grade purpose of elementary school in the first semester of English subject.

Table 1. **Initial Competence, Learning Objectives, Meaningful Understanding of fifth grade elementary school in the first semester of English subject**.

Initial Competence	Learning Objectives	Meaningful Understanding
1. Students are able to know various types of animals.	1. Students can identify characteristics about animals.	Students are able to understand various types of animals, their characteristics and characteristics.

2. Students are able to name several animals correctly.	2. Students can change/replace adjectives about animals.	
	3. Students can understand words that describe physical appearance using animated film clips.	
	4. Students can describe orally the physical appearance of the selected animal.	

Wiersma et al (2009) state that construct validity refers to theoretical construct trait being measured, but not to the technical construction of the test. This validity is used to examine whether the test has a consistent representation with theories underlying the material given or not.

3.4.1. Reliability

After having tested the validity of the instrument, the next step is to examine the reliability. A test is considered reliable if the same test is given to the same subjects or matched subjects in two different occasions, the test should yield similar result (Brown, 2000). (Wiersma et al., 2009) added that reliability is the consistency of the instrument in measuring whatever it measures. It means that if the instrument has a consistent result in the second chances or more, the instrument is reliable. The instrument reliability was estimated by using Cronbach Alpha reliability test. Based on the results, the value of α was 0.910. The table shows that the instruments used in this study have a high level of reliability. The calculations were done using a computer program SPSS version 19.0.

Table 2. **Reliability test**

Reliability Statistics

Cronbach's Alpha	N of Items
.910	20

3.5 Data Collection Instrument

As explained earlier, researchers used quasi experimental as a research method. Here the researcher uses tests as the main technique in collecting data in his research. Because the quasi experimental was chosen, the researcher used a pre-test and post-test to find out the comparison of the object being studied. This pre-test and post-test were given to both groups, namely the Experimental group and the control group in grade 5 elementary school at Anuban Chumchon Phukradueng school. and here is an explanation of the stages carried out by researchers in their data collection techniques:

1. Pre-Test

In this first stage, the researcher gave a pre-test to both groups to find out their level ability on the topic to be studied. So both of the class given the same test in different day. All of the students so interested and little bit nervous when the test was given by researcher. The time that given to finish the test was 90 minutes. The reason researcher gives 90 minutes because he understands about student's background knowledge.

2. Treatment

In this second stage, each group received a different treatment. In here the students 4 times to get the treatment. The experimental group was given special treatment

which is part of the the animation movie. While the control group did not get special treatment in here, so they just get conventional methods.

3. Post-Test

At this last stage the researcher gives a post-test to find out the difference between each group after getting treatment, whether there is an improvement in vocabulary mastery or not. In this activity the researcher will get answer to the questions in his research.

So the total meeting in here is 6 meetings, the first meeting for the pre-test then the second to fifth meetings for treatment and the last meeting was used for the post-test. The time used in one meeting for treatment is only 50 minutes which is fairly short so researchers must manage time well.

3.6 Data Analysis

There were two techniques of analyzing the data of this research, namely descriptive and inferential statistics. In the descriptive analysis, there were two formulas used in the computation; the mean and the standard deviation analysis. In the inferential statistics, this research used test of normality, test of homogeneity, and test of hypothesis. The testing steps would be described as follows:

1.   Descriptive statistic

The descriptive analysis was aimed at providing answers to the research question about the impact of teaching using video on students' vocabulary mastery. The statistics used in computation were the mean and the standard deviation. The mean was the average score attained by the subjects of the research. The standard deviation was the average variability of all the scores around the mean. The larger the standard deviation was the more variability was from the central point in the distribution, and vice versa.

2.   Inferential statistic

The inferential analysis used in this study was the analysis of covariance (ANCOVA) test. ANCOVA test was used because the researcher took into account the pre-test score. The pre-test score was used as the covariance. This answers the question in the problem of this research, namely *whether the video is effective and has a significant impact on students' vocabulary mastery*. However, before the test was conducted, the prerequisite test for analysis was carried out, namely the normality and homogeneity tests.

a. Test of Normality

This test aimed to find out whether or not the collected data showed a normal distribution. This research used Kolmogorov-Smirnov test. Kolmogorov-Smirnov test assessed whether the data were normally distributed or not. If the P-values (significance) is less than $\alpha = 0.05$, the data were not normally distributed, otherwise if the P-values is more than $\alpha = 0.05$ then the data is normally distributed (Carver & Nash, 2012).

b. Test of Homogeneity

The test was used to find out whether or not the sample variance was homogeneous. The homogeneity test was intended to test the equality of variance-covariance matrix of the dependent variable of this study. One test for assessing whether variances are homogeneous is Levene's Test, which is simply one-way analysis of variance on the absolute deviation of each score from the mean for the group (Cramer, 2003) If the value of significance (probability) on the Levene's Test is greater than 0.05, then the variance in variables are homogeneous.

c. Test of Hypothesis

ANCOVA test was carried out to see if there was a significant difference in the speaking ability between the fifth grade students of Elementary School who were taught by using video and those who were not taught by video. It was used to find out the difference. In this test, the hypothesis was accepted if F-value of observation (F0) in the statistics result was higher than value of the F-table (Ft) or P-value was lower than 5% or 0.05.