

## **CHAPTER III**

### **METHODOLOGY**

In this chapter, there is a brief explanation of the method used in conducting the study, which concerning the implementation of picto-textual glosses in teaching vocabulary to students of one junior high school in Desa Sukaraja Baru, Palembang. This chapter consists of five major sections: (1) section 3.1 restates the research questions as has been mentioned in chapter one; (2) in section 3.2 concern with the research method of the study; (3) section 3.3 tells about the population and sample that taken for this study; (4) section 3.4 tells about the data collection techniques, including the instruments used in collecting the data for this study; (5) section 3.5 provides the data analysis techniques.

#### **3.1 Reseach Questions**

As stated before in chapter one, there are two research questions that were formulated in this study:

- (1) Is the implementation of picto-textual glosses text at a junior high school in Desa Sukaraja Baru, Palembang effective in improving students' vocabulary achievement?
- (2) Does the implementation of picto-textual glosses text at a junior high school in Desa Sukaraja Baru, Palembang influence students' reading motivation?

#### **3.2 Research Method**

In this study, the researcher used one design of the experimental studies, namely one group pretest-posttest design. The one-group pretest-posttest design is a research design where one group of participants is pretested on the dependent variable and then post tested after the treatment condition has been administered. There is no comparison group in this design (Hatch & Farhady, 1982; Kirk, 1995; Fraenkel, Wallen & Hyun, 2012). The diagram of this design is as follows:

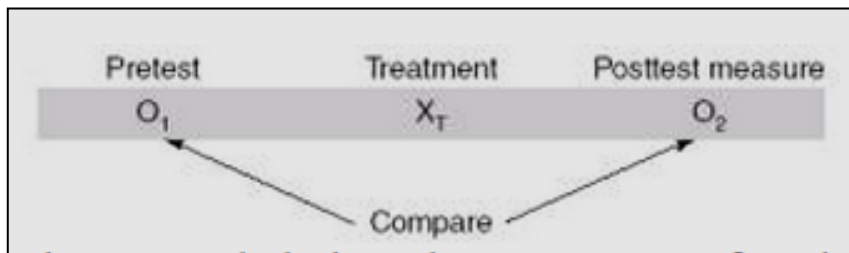


Figure 2: one-group pretest-posttest design, adapted from *Research Design and Statistics* (Hatch & Farhady, 1982)

Where,

$X_T$  = the treatment (in this study, the implementation of Picto-textual glosses)

$O_1$  = Pretest assessment

$O_2$  = Posttest assessment

The researcher chose one-group pretest-posttest design in this study considering the availability of the population and sample of this study. The one-group pretest-posttest design is a research design where there is only one group of participants (there is no comparison group) is pretested and then post tested after the treatment condition has been administered (Hatch & Farhady, 1982; Kirk, 1995). The population of this study is the seventh grade students in one junior high school. They were divided into 5 classes. There were two English teachers for these 5 classes. One teacher teaches three classes and the second teacher teaches the other two classes. Previously, the researcher chose the two classes taught by the second teacher to be the sample of this study; divided them into control and experimental group; and gave them pretest. Based on the pretest conducted to those two classes, the researcher found that those two classes were not equal since the students' pretest mean scores has significant difference and could not be compared (Hatch & Farhady, 1982; Kirk, 1995). Then, the researcher chose one-group pretest-posttest design in reporting this study. Only the results of the students' in experimental group were analyzed and the results of the students' in control group were ignored.

### 3.3 Research Setting, Population and Sample

#### 3.3.1 Research Setting

This study was undertaken in a junior high school in Desa Sukaraja Baru, Palembang, South Sumatera Province. The school was chosen due to some reasons. First, the researcher had good access to the school. Since the researcher known the teachers in the school, especially English teacher, the researcher can get much information about the students in the school. Malley & Hawkins (2003) recommended researchers have a personal connection with their site for few reasons. One of the reasons is the researcher can get broad access to the information needed, such as the students' problem, background, and also previous achievement. Second, it was located in the same town as the researcher. It made the researcher can easily manage the time in conducting the study. As stated by McMillan and Schumacher (2001), the site should make the study become more feasible and suitable in terms of time, mobility and skills.

#### 3.3.2 Population

The population of this research is the seventh grade students of one junior high school in Desa Sukaraja Baru, Palembang in academic year 2014/2015. Seventh grade students that consisted of students in range age from 12-15 years old were considered as young learners (Amri, Ayadi, & Abidi, 2006; Ersoz, 2007) that become the participants of this study. There will be 127 students as the population. The distribution of the whole population can be seen in table below:

**Table 1**  
*The Population of the Study*

No	Class	Male	Female	Number of Students
1	7.1	13	14	27
2	7.2	12	15	27
3	7.3	10	15	25
4	7.4	10	11	21
5	7.5	11	16	27
<b>Total</b>		<b>56</b>	<b>71</b>	<b>127</b>

*Source: one Junior high school in desa Sukaraja Baru, Palembang, Academic year 2014/2015*

### **3.3.3 Sample**

There is one class of the seventh grade students of one junior high school in Desa Sukaraja Baru, Palembang that being selected as the sample of this study; class of 7.4. This class is placed on one group: experimental group. The total number of students in this sample class is 21 students. There are 10 male students and 11 female students.

### **3.4 Teaching Procedures**

In this study, the researcher gave treatments to the experimental group for nine meetings. The treatments were conducted in the classroom of participants twice a week in the schedule of English subject. They were scheduled twice a week, each of which 80 minutes long. All the meetings were consisted of pre, whilst and post activities.

#### **3.4.1 Pre-activities**

Pre activities are intended to construct students' background knowledge before the lesson was given (Medina, 2008). In this study, the vocabulary teaching and learning are done trough reading text. Medina stated that pre reading activity stimulates students' prior knowledge about a topic and involves students in the vocabulary of a text before they start to read the text. In this study, pre activities consisted of the opening of the class session. The teacher started the class with greeting the students and asking their condition. After that, the teacher checked the students' attendance to check whether all the students joined the class or not. Then, the teacher began the presentation of the lesson. The teacher asked about the prior knowledge of the vocabulary that the students already have before. Prior knowledge as things the students already known become important single factor influencing learning (Ausubel, 1968, as cited in Meyer, 2004). The teacher gave some random questions about the topic that will be given in the class session. Further, the teacher informed students about the topic/material that will be learned for that session. The teacher also informed students the teaching objectives.

### **3.4.2 Whilst activities**

In whilst activities, the teacher presented the lesson: vocabulary learning. The vocabulary learning was given through reading. Teacher took the learners through the reading and they interact in the text with some tasks while reading (Nunan, 1989; Celce-Murcia, 1991).

First, the teacher showed the vocabularies that will be learned in that meeting. The teacher provided the students with one big picto-textual glosses poster text which stick on the whiteboard in front of the class. The picto-textual glosses text provides the combination of picture and text that explain the word with the meaning (Chun & Plass, 1996; Yanguas, 2009). The pictures and texts glosses were put in the margin of the text in order to make the students easier to find it (Yanguas, 2009). The teacher also distributed picto-textual glosses handouts text to the students. The picto-textual glosses handouts text was exactly same with the poster in the whiteboard. Example of picto-textual glosses text given in the experimental class can be seen in figure 3.

After distributing the handouts, the teacher asked the students whether they had already known about the unfamiliar words given in the texts or not (the unfamiliar words in the text were printed bold that differentiate them from other words in the text). It is done to re-check the students' prior knowledge of the vocabularies presented in the text (Medina, 2008). Further, the teacher asked the students to read the text. Then, the teacher asked the students to spell the underlined vocabularies and asked them the meaning of the words. The teacher gave some questions about the unfamiliar words' meaning to check the students' vocabulary after reading the text with picto-textual glosses.






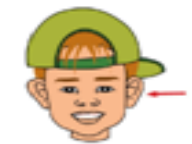




	<h3>Little Red Riding Hood</h3>	
<p><b>7 KEPALA</b></p>	<p>Once upon a time there was a dear little girl who was loved by everyone who looked at her, but most of all by her grandmother, and there was nothing that she would not have given to the child. Once she gave her a little riding hood of red velvet, which suited her so well that she would never wear anything else; so she was always called 'Little Red Riding Hood.' She was beautiful. She has round eyes and sharp nose<sup>1</sup>. Her blonde hair<sup>2</sup> was smooth. Her lips<sup>3</sup> always gave smile to everyone.</p>	<p><b>1 HIDUNG</b></p>
	<p>One day, Little Red Riding Hood's mother said to her, "Take this basket of goodies to your grandma's cottage, but don't talk to strangers on the way!" Promising not to, Little Red Riding Hood skipped off. On her way she met the Big Bad Wolf who asked, "Where are you going, little girl?" "To my grandma's, Mr. Wolf!" she answered. The Big Bad Wolf then ran to her grandmother's cottage much before Little Red Riding Hood, and knocked on the door. When Grandma opened the door, the Big Bad Wolf tied up her hands<sup>4</sup> and feet<sup>5</sup>, closed her mouth<sup>6</sup> with a scarf, and locked her up in the cupboard. The wicked wolf then wore Grandma's clothes, covered his head<sup>7</sup> with a scarf and lay on her bed, waiting for Little Red Riding Hood.</p>	
<p><b>8 MATA</b></p>	<p>When Little Red Riding Hood reached the cottage, she entered and went to Grandma's bedside. "My! What big eyes<sup>8</sup> you have, Grandma!" she said in surprise. "All the better to see you with, my dear!" replied the wolf. "My! What big ears<sup>9</sup> you have, Grandma!" said Little Red Riding Hood. "All the better to hear you with, my dear!" said the wolf. "What big teeth<sup>10</sup> you have, Grandma!" said Little Red Riding Hood. "All the better to eat you with!" growled the wolf pouncing on her. Little Red Riding Hood screamed and the woodcutters in the forest came running to the cottage. They beat the Big Bad Wolf and rescued Grandma from the cupboard. Grandma hugged Little Red Riding Hood with joy. The Big Bad Wolf ran away never to be seen again. Little Red Riding Hood had learnt her lesson and never spoke to strangers ever again.</p>	<p><b>10 GIGI</b></p>
		
<p><b>6 MULUT</b></p>		<p><b>9 TELINGA</b></p>
		
<p><b>2 RAMBUT</b></p>		<p><b>3 BIBIR</b></p>
		
<p><b>4 TANGAN</b></p>		<p><b>5 KAKI</b></p>

Figure 3: Picto-textual glosses text given in the treatment.  
(Adapted from students' lesson book: *Learning More English 1*)

### 3.4.3 Post Activities

In the end of the session, the teacher asked the students to do the vocabulary exercises. The vocabulary exercises were given in each meeting of the treatment. The vocabulary exercises were consisted of vocabulary check exercise and vocabulary multiple choice exercise. The exercises were conducted to assess the students' vocabulary knowledge. In vocabulary check exercise, the students were given the vocabularies and were asked to write down the meaning. The vocabulary checked aimed to ensure the how well the students understand the vocabularies breadth. As explained by Milton (2009, pp.13-14) that vocabulary breadth might involve the passive recognition of word forms quite separate from meaning; the kind of recognition where you know a word is a word in a foreign language. Vocabulary breadth can be measured by a translation test where the students provide a translation equivalent or some kind of explanation. Example of the vocabulary checked exercise can be seen in figure 4.

After distributing the vocabulary checked exercise, the teacher gave the multiple choice exercise to the students. Spencer (2000) stated that of various measures available in assessing vocabulary, a multiple-choice assessment was the general standardized test format to measure the depth of learners' word knowledge. Example of the vocabulary multiple choice exercises can be seen in figure 5.

VOCABULARY CHECK	
1. NOSE	: _____
2. HAIR	: _____
3. LIPS	: _____
4. HAND	: _____
5. FEET	: _____
6. MOUTH	: _____
7. HEAD	: _____
8. EYES	: _____
9. EARS	: _____
10. TEETH	: _____

Figure 4: Vocabulary Checked Exercise  
(Adapted from students' lesson book: *Learning More English 1*)



Exercise:

Choose the right words for each pictures!

1. \_\_\_\_\_

- a. Nose
- b. Leg
- c. Chair
- d. Hair



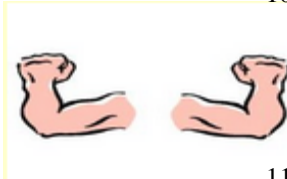
9. \_\_\_\_\_

- a. Forehead
- b. Face
- c. Chin
- d. Cheek



2. \_\_\_\_\_

- a. Leg
- b. Arms
- c. Face
- d. Mouth



10. \_\_\_\_\_

- a. Finger
- b. Knee
- c. Toe
- d. Leg



3. \_\_\_\_\_

- a. Ear
- b. Eye
- c. Face
- d. Nose



11. \_\_\_\_\_

- a. Finger
- b. Knee
- c. Toe
- d. Leg



4. \_\_\_\_\_

- a. Hair
- b. Head
- c. Arm
- d. Leg



12. \_\_\_\_\_

- a. Tooth
- b. Tongue
- c. Mouth
- d. Face



5. \_\_\_\_\_

- a. Tooth
- b. Eye
- c. Mouth
- d. Ear



13. \_\_\_\_\_

- a. Tooth
- b. Tongue
- c. Mouth
- d. Face



6. \_\_\_\_\_

- a. Hair
- b. Nose
- c. Mouth
- d. Leg



14. \_\_\_\_\_

- a. Leg
- b. Knee
- c. Foot
- d. Ankle



7. \_\_\_\_\_

- a. Neck
- b. Chest
- c. Shoulder
- d. Back



15. \_\_\_\_\_

- a. Ear
- b. Eye
- c. Leg
- d. Mouth



8. \_\_\_\_\_

- a. Hands
- b. Arms
- c. Tooth
- d. Leg



Figure 5: Vocabulary Exercise

(Adapted from students' lesson book: *Learning More English 1* and internet)



### **3.5 Data Collection**

In this section, the techniques for collecting and analyzing the data of this study were presented.

#### **3.5.1 Data Collection Techniques**

In this study, the data were collected by using some techniques of qualitative and quantitative data collection. This section discusses data collection methods including tests; pretest and post-test, questionnaire, interview, observation, and document review. The quantitative data of this study will be collected by using two instruments: test and questionnaire. And the qualitative data of this study will be collected by using interview, observation, and document review (the students' daily worksheet). The descriptions of the instruments used in this study are as below:

##### **3.5.1.1 Tests**

Test is series of questions or exercise or other means to measure skill, knowledge, intelligence, and capacities of an individual or a group (Arikunto 2002, p. 127). Vocabulary test was given in form of pre-test and post-test before and after treatment. Pre-test is intended to know the students' prior knowledge of the vocabulary mastery and posttest is done to measure the students' vocabulary improvement after getting the treatment. The pretest (see appendix 1 for the items) is aimed to see and compare the existing ability of the students in groups involved in the study. Then, after doing the treatments, the posttest (see appendix 3) is conducted to see the effect of the treatment on students' reading comprehension performance. The result of the pre-test and posttest was calculated to find the mean scores. Then the mean score of pretest was compared to the posttest mean score to find the differences.

The form of the tests chosen is multiple-choice items with several considerations. Based on Brown (2005, p. 47) multiple-choice items are suitable for testing vocabulary. It also can be administered and scored easily. It can be administered and scored in shorter time than the other formats of tests and it can be scored by machine or software (Dickinson, 2012). Moreover, the multiple

choice items scoring system is more reliable and more accurate (sagepub.com, p. 140). In the term of analyzing the validity and reliability of test items, analyzing the validity and reliability of them is simple and easy (Brown, 2001 p. 386).

In constructing the items of the test, the researcher considers some points in order to fulfill the criteria of good instrument. The quality of instruments used in research is very important. A good instrument should be valid and reliable (Fraenkel, Wallen & Hyun. 1990, p. 147). They stated that validity refers to the appropriateness, meaningfulness, correctness, and usefulness of the inferences a researcher makes, while reliability refers to the consistency of scores or answers from one administration of an instrument to another, and from one set of items to another).

Content validity and face validity of this test are used in maintaining the validity of the test. In maintaining content validity (Hatch and Farhady, 1982, p. 250), the construction of the test items is referred to the vocabulary mastery improvement that can be seen from the word knowledge that being categorized into three in this study. To support the face validity, the items are constructed in the same number of options, similar length of options and similar organization (Hughes, 2003, p. 33; Brown, 2004, p. 27). In order to check the reliability and difficulty levels of the test, the test items are tried out and subsequently modified (Hatch and Fahardy, 1982, p. 253). The items were tried out to several students who are not involved in this study. This try out is aimed to see bad items or distracters and to gain the ideal levels of difficulty. There are 80 items on the try-out but only 40 items are selected for each test. The selection is based on difficulty and comprehension levels.

### **3.5.1.2 Questionnaire**

The second instrument is questionnaire. Hornby (2000, p. 962) states that a questionnaire is a list of questions given to a number of people called respondent in order to get information about their opinion about something. The questionnaire will be given after the posttest, in the end of the research. The questionnaire is

conducted to know the students' motivation and their response, perception, and view toward the using of Picto-Textual Glosses that they have been exposed. The researcher wants to know the students' reading motivation differences before and after the treatment was given.

The researcher wants to see whether the implementation of picto-textual text influence the students' reading motivation or not. The researcher used ready-made questionnaires taken from e-journal. The questionnaire were designed to find out whether the students motivated to read or not. It adopted from MRP reading survey (Pitcher, Albright, Delaney, Walker, et.al, 2007). It was taken from journal with title '*Journal of Adolescent & Adult Literacy*' 50:5, 2007. With the journal article title was '*Assessing Adolescents' motivation to read*' pp. 381-382. The MRP reading survey consisted of 20 questions deals with "Selfconcept as a reader" and "Value of reading".

### **3.5.1.3 Interview**

Fraenkel and Wallen (1991, pp. 450-451) said that interview is an important way for researcher to do the data verification. It was also said that the purpose of interviewing people is to find out what is on their minds. In collecting qualitative data, the interview commonly used can be divided into three types: informal (unstructured), semi-structured, and formal (highly structured or standardized) interview (Fraenkel & Wallen, 2012). The interview is classified by the amount of structure involved. Informal interview does not have predetermined questions topics. Questions came forward from the immediate context and were asked in the natural conversation. It allows the researcher to be responsive to individual differences of respondents and to enhance the salience and relevance of questions. Semi-structured interview is verbal questionnaire. It consists of a series of questions which designed to elicit specific answers from respondents. Semi-structured interview has the questionnaire framework that starts with more general questions or topics. Semi-structured interview can be characterized as a relatively guided and relaxed discussion based around a predetermined topic. Formal

(highly structured) interview is also verbal questionnaire. It also consists of a series of questions where detailed questions are prepared in advance. This type of interview is less flexibility than the semi-structured interview.

Interview has some strength and challenges in its implementation in a study. Goldman, Baldasare, & Meyers (2012) summarized the strengths and challenges of interview in their article (see: [http://www.studentaffairs.arizona.edu/assessment/documents/AlternativeMethods\\_of\\_DataCollection.pdf](http://www.studentaffairs.arizona.edu/assessment/documents/AlternativeMethods_of_DataCollection.pdf)). The strengths of interview stated by Goldman, Baldasare, and Meyers are (1) interview have comfortable conversational format; (2) rapport with interviewer can yield better data; (3) interview is good for sensitive subject matter; (4) the questions in interview can be repeated or clarified; (5) interview gives opportunity to probe for more information; and (6) interview provides richly contextual and believable results. While, in other side, interview also has some challenges such as: (1) interview is time consuming; (1) interview is not appropriate for large sample sizes (except with some structured interviews); (3) in interview, chance of personal biases of researcher that can affect the data may occurred.

In this study, the researcher applied the semi-structured interview. Interview in this study is done to find out the experimental group students' opinions about the application of picto-textual glosses in their text. The predetermined questions are constructed as guided questions for each group. The set of questions had been prepared in advance, but they were open enough to allow the interviewees to express their thoughts, feelings, or opinions freely throughout the interview. There were each 5 predetermined questions for experimental and control group. The guided questions for interviewing students in experimental group are (1) do you like reading?; (2) do you like English lesson?; (3) which kind of text do you like more, text with or without picto-textual glosses?; (4) which text is easier to be understood, text with or without picto-

textual glosses?; (5) which text that help in understanding the vocabularies, text with or without picto-textual glosses?. These questions were developed by the interviewer when the interview was going on.

The interviews were conducted after the whole meeting was done. The researcher interviewed some of students in experimental group to find out their opinion about the implementation of the picto-textual glosses text in reading activity. The language used in the interviews was Bahasa Indonesia. It appeared that the use of native language in interviews has compensated the difficulties often arouse by the interviewees to express themselves clearly. The time required for the interviews ranged from 3 – 7 minutes. The schedules for the interviews can be seen as follows.

**Table 2**  
*The Detail Schedule of the Interviews*

No	Student/Subject	Date	Duration
1.	Student MM	Wednesday, May 28 <sup>th</sup> , 2014	3:34 minutes
2.	Student SS	Wednesday, May 28 <sup>th</sup> , 2014	4:13 minutes
3.	Student DY	Wednesday, May 28 <sup>th</sup> , 2014	4:27 minutes

*Note: the interviews were given after the last meeting was finished.*

*Source: Researcher's Data and Documentations.*

Then, the interview data were interpreted to answer research problems and compared to the theory underpinning the study (Emilia, 2009:197).

#### **3.5.1.4 Observation**

The researcher conducted observations during the treatment given to experimental group in order to get additional data to support the data gained from pretest and posttest. Observations were done to gather the data about students' learning experience and teacher's performance in reading activities with picto-textual glosses text. The observations were conducted in this research as it gathers

first-hand information about social processes in a naturally occurring context, as stated by Silverman (1993, p.11). It was also supported by Merriam (1998) who stated that to observe things which may lead to understanding the context as one of the reasons why an investigator collect data through observation.

Patton (1980) stated that observation has several advantages in such a task (as cited in Alwasilah, 2002). The advantages of observation are (1) make a better understanding of the context, within which students react and cope with their language anxiety; (2) allow for inductive approach, thereby making it less dependent on prior conceptualization; (3) offer an opportunity to gain information on sensitive topics, such as interpersonal competition among certain students, that they may not be willing to talk about in an interview; (4) provide the resources otherwise unattainable - observer's impression, feeling, reflection and introspection. These can be part of meaningful data to allow for understanding and interpreting the events and behaviors with a holistic perspective.

The observation in this study was conducted three times. The observations were done in the first, fifth, and ninth meeting of the study (the study were held in nine meeting). In this study, the researcher took a role as a participant observer. Fraenkel and Wallen (1932, p. 446) said that participant observation is an observation where the researcher actually participate in the situation they are observing. In conducting the observation, the researcher used field notes. Field notes here, as Fraenkel & Wallen (2012) stated, are as the detailed notes observers take in the educational setting (classroom or school) about what is going on, what they hear, see, experience, and think in the course of collecting and reflecting on their data. The researcher also used videotaping to help the researcher in observing the class.

Videotaping was taken for every session of teaching and learning process that being observed. Videotaping was used to capture both teacher and students' performance and interaction that took place in the classroom. Videotaping can provide contextual, spatial, and temporal information of vital interest. Videotaping

allows an observer to replay an observation, to manipulate time and space, to make minute examination of events, and to examine actions and behavior by several people after the fact. (Wilkinson & Brady, 1982)

The researcher asked the class teacher to be the co-observer while the researcher took the role as the teacher to give the treatment to the class. It was done as an effort to minimize the subjectivity that might be encountered by the researcher. The co-observer was invited to play a passive participation and had a job to take notes on what happened in the teaching and learning process. As Cohen, Manion and Morrison (2000, p. 187) stated that the presence of another observer was intended to take notes at the scene while a situation was going on in order to avoid missing important event. By having other observer in the class, the researchers have opportunities to have someone else opinion and perspective, and also to have input (suggestions or ideas) from a colleague.

### **3.5.1.5 Document Review**

In order to gain some additional data to be collaborated with other findings in this study, the teacher did the document review from the existing documents to collect the data. There are many types of existing documents can be analyzed as assessment data (Goldman, Baldasare, & Meyers, 2012). They are (1) Public records – the official, ongoing records of a population's (can be class, organization, etc) activities; (2) personal documents – first-person accounts of an individual's actions, experiences, and beliefs; (3) physical evidence – physical objects found within the study setting (often called artifacts).

Document review also has strengths and challenges. Goldman, et.al (2012) proposed some strengths and challenges in applying document review collecting data method in research. The strengths of document review are (1) the data of document review are usually readily available; (2) it has unobtrusive data collection; (3) it mostly spends low cost; (4) it has stable form of data; (5) the documents are viewed as precise; (6) it can be quickly done; (7) it does not require coordination with others. Goldman et al also stated some challenges of



document review namely (1) it may be restricted or protected documents; (2) it may be also usually incomplete or inaccurate documents; (3) the documents can be context, culture, and/or language specific; (4) it may be limited/ no ability to follow up for more info; and (5) it may by lack of objectivity in some documents.

Goldman, et.al (2012) also explained the common use of document review. They classified the use of document review into three: Primary data source, secondary data source, and exploratory. Primary data source provides direct information about student life, activities, and institutional processes. Secondary data source is used to supplement interviews, observations, and quantitative analysis. And exploratory is used to generate questions for interviews, surveys or identify events to be observed.

In collecting the data through document review, the researcher used the students' daily worksheets. The students' worksheets were used in this study in order to find out students' vocabulary achievement in every meeting. The researcher conducted nine meetings in this study. In every meeting, the researcher gave a vocabulary checked test to measure the students' vocabulary. The results of the vocabulary checked test become the documentations that will be compared and synchronized with the findings from other instrument of this study.

Finally, by analyzing the qualitative and quantitative data, the researcher can make conclusion whether or not the use of picto-textual glosses text can improve the students' vocabulary and influence the students' reading motivation. If almost all of the students in experimental group give positive responses to the teaching learning process and their post-test score is higher than pre-test score, the technique is successful. On the contrary, if the students give negative responses to the teaching learning process and their post-test score is lower than pre-test score, the technique is not successful.

### **3.5.2 Data Analysis Techniques**

In this study, the analysis of the data were collected by using some techniques, the writer used the *t*-test to compare the pretest and posttest in

experimental group, and percentage formula to analyze the quantitative data. The researcher also analyzed the qualitative data from the result of interview, observation, and documents. The stages in analyzing the qualitative data are as follows: assembling the data, coding the data, comparing the data, building interpretations, and reporting the outcomes (McKernan, cited in Burns 1999, pp. 156-160)

### **3.5.2.1 Tests (pretest and posttest)**

In analyzing the data from pretest and post-test, the researcher used ANATES V.4 and *t*-test formula. ANATES V.4 (Karnoto and Wibisono, 2003) could automatically analyze the reliability, the level of difficulty, discrimination index, and distracters' quality of the items. It helps the researcher to identify the quality of the test items appropriately and quickly. Then, the data from the test will be analyzed by using a standard formula of *t*-test. According Popham and Sirotnik (1973, p. 125), *t*-test is used to determine how great the difference between two means must be for it to be judged significant, that is a significance departure from differences. In this study, the writer will use paired samples *t*-test. The writer use Paired Samples *t*-test to find out whether there are significant difference in scores between the result of the pre-test and post-test in the experimental group. To run out these statistical analyses, the writer used SPSS v.20 system.

The procedures of analyzing the data from tests are as follows.

#### 1) Data Entry and the Analysis via ANATES software

Firstly, the names of participant are coded. Then, the key answers and students' answers are inserted into ANATES V.4. Then, the correct answers will be scored and one correct answer will get one score. The sum of correct answers is divided by the number of the items to have percentage point. Finally, the reliability, the level of difficulty, discrimination index and distracters' quality of the items will be analyzed automatically by clicking the menu.

## 2) T-test analysis via SPSS V.20

The total scores obtained from ANATES V.4 were analyzed through the SPSS v.20 software. This analysis was intended to see the effect of picto-textual glosses implementation in students' vocabulary mastery. It compared the mean scores of total scores of both tests. Since there are two tests, paired sample t-test is chosen (Hatch and Fahardy, 1982, p. 111, Cohen, Manion and Morrison, 2000, p. 505).

### 3.5.2.2 Questionnaire

For assessing the Students' reading motivation, the writer used the Reading Motivation Questionnaire adopted from MRP reading survey (Pitcher, Albright, Delaney, Walker, et.al, 2007). It was taken from journal with title '*Journal of Adolescent & Adult Literacy*' 50:5, 2007. pp. 381-382. The writer calculated the data by using Scoring Guidelines from the journal of Delaney et al (2007, pp. 385-386). See figure 6.

The data result was summarized into a table and diagram. Then the writer analyzed the result of the questionnaire by using percentage and t-test analysis. The result of the questionnaire was interpreted by using percentage formula as follows:

$$P = \frac{F}{N} \times 100\%$$

Where: P = Percentage of the respondents' choice

F = The total of respondents' choices

N = The total number of the respondents.

Then, the researcher used t-test analysis from SPSS v.20 to compare the mean scores of the reading motivation questionnaire conducted in the beginning and the end of this study.

**MRP reading survey scoring sheet**

Student name \_\_\_\_\_

Grade \_\_\_\_\_ Teacher \_\_\_\_\_

Administration date \_\_\_\_\_

Recording scale

1=4  
2=3  
3=2  
4=1

Self-concept as a reader	Value of reading
*recode 1. _____	2. _____
3. _____	*recode 4. _____
*recode 5. _____	6. _____
*recode 7. _____	*recode 8. _____
9. _____	*recode 10. _____
11. _____	12. _____
13. _____	14. _____
*recode 15. _____	16. _____
17. _____	*recode 18. _____
19. _____	*recode 20. _____

SC raw score: \_\_\_\_\_/40      V raw score: \_\_\_\_\_/40

Full survey raw score (Self-concept & Value): \_\_\_\_\_/80

Percentage scores:

Self-concept _____
Value _____
Full survey _____

Figure 6: MRP Reading Survey Scoring Sheet

Source: *Assessing Adolescents' motivation to read* (Pitcher, Albright, Delaney, Walker, et.al, 2007)

### 3.5.2.3 Interview

The interview was analyzed using content analysis as explained by Fraenkel, Wallen & Hyun (2012) that content analysis is a technique that enables researchers to study human behavior in an indirect way, through an analysis of their communications. In content analysis, researcher develops appropriate categories, ratings or scores that can be use by the researcher to organize large amount of data. In addition, the content analysis, as Cohen, Manion & Morrison (2000), involves “*coding, categorizing, comparing and concluding from the text.*” In this study, the data taken from interview were classified and categorized into themes. One category to another was compared to reach a similar conclusion which would then be selected as the final data in form of a condensed body of information.

### 3.5.2.4 Observation

In this study, the researcher asked the class teacher to be a co-observer. The observation sheet was filled by the co-observer. The researcher also videotaped the teaching and learning. There were some points that are being observed: (1) what the teacher says, (2) What the teacher does , (3) what the students say , (4) what the students do. The observer was also asked to leave some comments about what happen during the teaching and learning process in the meeting. In analyzing the data gathered from the observation, the researcher used codification using coding scheme. Coding schemes have been used to measure interactions between two kinds of object, it can be parents and adolescent children, doctor and patient, and also teacher and students (Fraenkel and Wallen . 2012, p. 449). The coding scheme used to measure the students-teacher interaction in this study is the scheme that was developed by Amidon and Flanders (1967) as cited by Fraenkel and Wallen in their book (2012, p. 450) (see figure below). The observer was required to judge and categorize behavior as it occurred.

<b>Teacher Talk</b>	Indirect Influence	<ol style="list-style-type: none"> <li>1. <i>Accepts feeling</i>: accepts and clarifies the feeling tone of the students in a nonthreatening manner. Feelings may be positive or negative. Predicting and recalling feelings are included.</li> <li>2. <i>Praises or encourages</i>: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head or saying “uh huh?” or “go on are included.</li> <li>3. <i>Accepts or uses ideas of student</i>: clarifying, building, or developing ideas or suggestions by a student. As teacher brings more of his or her own ideas into play, shift to category five.</li> <li>4. <i>Ask questions</i>: asking a question about content or procedure with the intent that a student answers.</li> </ol>
	Direct Influence	<ol style="list-style-type: none"> <li>5. <i>Lectures</i>: giving facts or opinions about content or procedure; expressing his or her own ideas; asking rhetorical questions.</li> <li>6. <i>Gives directions</i>: directions, commands, or orders with which a student is expected to comply.</li> <li>7. <i>Criticizes or justifies authority</i>: statements, intended to change student behavior from non-acceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he or she is doing, extreme self-reference.</li> </ol>
<b>Student Talk</b>		<ol style="list-style-type: none"> <li>8. <i>Student talk-response</i>: talk by students in response to teacher. Teacher initiates the contact or solicits student statement.</li> <li>9. <i>Student talk-initiation</i>: talk by students, which they initiate. If “calling on” student is only to indicate who may talk next, observer must decide whether student wanted to talk. If he or she did, use this category.</li> </ol>
		<ol style="list-style-type: none"> <li>10. <i>Silence or confusion</i>: pauses, short periods of silence, and periods of confusion in which communication cannot be understood by the observer.</li> </ol>

Figure 7: The Amidon/Flanders Scheme for Coding Categories of Interaction in the Classroom

Source : Fraenkel & Wallen, *Educational Research: A guide to the Process*.

New York: Mgraw-Hill, Inc.

From the figure 7, we can see that what were observed in the observations was focused on teacher’s and students’ talk. In teacher’s talk, the observer observed seven things that do by the teacher. They are (a) acceptance of feelings, (b) appraisal or encouragement, (c) the acceptance of students’ idea, (d) questioning, (e) lecturing, (f) giving directions, (g) criticizing or justifying authority. While in students’ talk, the observer observed three things (students’ talk-response, students’ talk-initiation, silence or confusion).

### **3.5.2.5 Document Review**

Goldman, Baldasare and Meyers (2012) stated that in analyzing the data from document review, the documents used for assessment are subjected to content analysis typically using one of two methods. The two methods are thematic analysis and rubrics. Thematic Analysis is done by coding the content into themes (emergent or pre-determined) and rubrics is done by grading or scoring a document according to pre-determined criteria

In this study, the researcher uses the rubrics method. The students' worksheets are scored according some criteria. The students' worksheets were given in form of small test, a vocabulary checked test. The students were given some words that had already learnt in that meeting and were asked to write down the meaning of the words. The score were given based on the sum of correct answer of the students.

### **3.6 Concluding Remark**

In summary, this chapter has focused on the research method used in this study to find out whether the implementation of picto-textual glosses in young learners students' reading text affect their vocabulary master and reading motivation or not. As previously stated, an experimental research method is used in this study which supported by the data collected through some instruments like test, questionnaire, interview, observation, and document review. The data in this study were collected both quantitatively and qualitatively. The quantitative data were collected through the result of test (pre and posttest) and the result of questionnaire. The qualitative data were collected through the result of the interview, observation, and document review. In brief, the research method in this chapter is served as a vehicle in conducting this study. The next chapter will present the findings of the data collection concerning the effect of picto-textual glosses implementation in students' reading text to their vocabulary mastery and reading comprehension.