Chapter Three

Research Methodology

This chapter discusses the research design research setting, population and sample of the research, data gathering technique, and data analysis method.

Research Design

This research was designed by using quantitative research design. According to Creswell (2012), quantitative research is a research in which investigators manage a survey to a sample or to the entire population of people to describe the attitudes, opinions, behaviors, or characteristics of the population. In this research, the researcher conducted the research using descriptive quantitative. The researcher used quantitative research, because the researcher conducted the research to describe the difficulties that were faced by the students and the strategies that they used in reading as generalization.

Setting of Research

The study was carried out at EED of UMY as the setting of this research. The researcher chooses EED of UMY as the setting because EED of UMY requires the students to read textbooks a lot. When the students read textbooks, they face difficulties and they use various reading strategies. Therefore, EED of UMY is suitable for the setting of this research because this research deals with students' reading difficulties and strategies.

Population and Sample

The population of this research were the students of batch 2014. The students of this batch were chosen since they had enough reading experience and they already know their difficulties and strategies in reading. The population of

students of batch 2014 was 160 students. According to Saleh (2011) the minimum number use of sample is presented in the following guideline:

Table 3.1 Number of sample	
Population	Sample
UP to 100	50%
101 to 500	30% to 50%
501 - 1000	20% – 30%
Above	15% – 20 %

Source: Saleh (2011)

The population of participant was 160 students at EED of UMY batch 2014. The sample taken was 64 students or it was about 40% of the population. So, the number of population is appropriate with the theory by Saleh (2011).

Data Gathering Techniques

In this study, the researcher used questionnaire as the instrument to collect the data. The questionnaire was used to measure difficulties in reading comprehension and reading strategies. The researcher adapted the questioner by Garcia et al; (2014). Seven categories of reading difficulty were meaning of word / vocabulary (Mehjadi, 2015), meaning of sentences (Borough, 2012), complex sentences structure (Borough, 2012), inability to connect ideas in a passage (Munková, Stranovská, Schuller, & Müglová, 2014, p.201).

, lack of concentration during reading (Nathan v, Lauren, Sarah, Lee, Adam & Natasha s, 2014), phonological processing (Sanahan, Mejer, & Salvadore, 2015)., and language processing (Sanahan, Mejer, & Salvadore, 2015). These categories consisted of fifteen items. Besides that, there were six categories of strategies in reading. They were predicting, questioning, visualizing, monitoring / clarifying / and fix up, drawing inferences, and summarizing / retelling. These categories consisted of fifteen items and related with theory by Sanahan et al (2010). The categories and item numbers of difficulties and strategies in reading are shown in Table 3.2 and 3.3.

Table 3.2 The Category of Difficulties in Reading comprehension		
NO	Categories	Item numbers
1	Vocabulary	QD 1, QD 2, and QD 4
2	Meaning of sentences	QD 15
3	Complex sentences of structure	QD 3
4	Inability to connect ideas in a passage	QD 6, QD 7 , QD 8
5	Lack of concentration during reading	QD 5, QD, 9, QD 10, QD 11, QD 12
6	Phonological processing	QD 13
7	Language processing	QD 14

Table 3.3 . The category of Stratgies in reading		
NO	Categories	Item of difficulties
1	Predicting	QS 13
2	Questioning	QS 14
3	Visualizing	QS 8 and QS 1
4	Monitoring / clarifying / and fix up	QS 2,QS 5,QS 6,QS 7,QS 9, QS 10, and QS 12
5	Drawing inferences	QS 3
6	Summarizing	QS 4, QS 11, and QS 15

The researcher distributed questionnaires to EED of UMY students batch 2014 at the classroom. Students spent ten minutes to answer thirty items questionnaire. After students finished answering questionnaire, the researcher took the result. The researcher used 65 questionnaires was distributed to participant of EED of UMY students batch 2014 in three class. 64 questionnaires was collected from participant in class of EED of UMY students batch 2014. The

questionnaire item and guidelines of questionnaire item are attached in Appendix 1.

Validity

Validity is the measurement to indicate the level of certain instrument (Arikunto, 2002). "Validity is the most important characteristic to consider when constructing or selecting a test or measurement technique" (Postlethwaite, 2005, p.39). The instrument is called valid when the instrument measures what the researcher wants to measure and can reveal the data of the variables. The researcher used construct validity. According to Cohen, Manion, and Morrison (2011, p. 188) construct validity "concerns the extent to which a particular measure or instrument for data collection conforms to the theoretical context in which it is located". Expert judgment from two lecturers of EED was used to ensure the validity of the instrument.

Reliability

General Education Development testing service (2009) mentioned that reliability is inversely related to the amount of measurement error in test scores. That is, the more measurement error present in test scores, the less reliable the test. In this study, the reliability performed used Cronbach`s Alpha Formula techniques in SPSS 22.0 for Windows.

The range of reliability criteria is presented in the following table.

Table 3.4 The Criteria of Relliability (Alpha)		
No	Scale of realibility	Interpretation
1	0.8 - 1.0	Good
2	0.6 - 0.799	Moderate
3	< 0.6	Not Good

The item reliability of Difficulties was 0.6. It means the reliability of Difficulties was in moderate level. The result of item reliability test of Strategies was 0.6. This means that the reliability of Strategies was in moderate level too.

Data Analysis Method

The data analysis method is a process to clarify the specific result of research with particular technique. This is to answer the research questions. This includes determining how to assign numeric scores to the data, assessing the types of scores to use, selecting a statistical program, and inputting the data into a program, and then cleaning up the database for analysis (Creswell, 2012). As this research uses quantitative method, the researcher make the results into a writing form that is easy to be understood and interpreted.

The researcher computed the data using electronic software for analysis (SPSS 22 program). The researcher calculated the level of student`s difficulties in reading comprehension and reading strategies using by the students at EED of UMY. Moreover, the researcher used scale referenced grading to measure the difficulties in reading comprehension and strategies that were used by students EED of UMY batch 2014. According to Sheridan (2016) the scale scores can be divided into several intervals. The Scale reference grading in this research is presented in figure 4 below:

Table 4. Scale referenced grading of difficulties and strategies in reading comprehension		
Scale Score	Scale Score Range	Interpretation
4	3.25 - 4.0	Always / Very High
3	2.5 - 3.24	Sometimes / High
2	1.75 - 2.4	Rarely / Medium
1	1 - 1.74	Never / Low

Source: Sheridan (2016)