

## **CHAPTER III**

### **METHODOLOGY**

This chapter explains the research design, population and sample of the research, instrument of the research, data collecting method, and data analysis.

#### **Research Design**

The aims of the research were to find out the students' most dominant intelligence at English Education Department, to reveal students' speaking skill and to know the correlation between the students' most dominant intelligences and students' achievement in speaking skill. This research included in correlational research; therefore, researcher made consideration in conducting research quantitatively. In this quantitative research, the questionnaire was used. Questionnaire is useful instrument for collecting survey information, providing structure, and often numerical data (Cohen, Manion & Morrison, 2011). Questionnaire is useful because it is simple to administer, to analyze, to complete, and to answer immediately by respondents (Creswell, 2012). In this study, questionnaire has been employed to 59 participants since questionnaire could be administered in big number of correspondent.

#### **Population and Sample**

Population is the subject of the study that being investigated. Whereas, the sample is the representative of the population (Cohan, et.al, 2011). In this research, the population were students of EED UMY 2014 which consisted of 189 students while there were 59 participants of this study. The sample used was systematic sampling. Creswell (2012) asserted that in systematic sampling

participant has an equal opportunity to be selected from population. Any bias could be avoided by using this sample. Thus, the researcher chose systematic sampling which it was a slight variation of the simple random sampling procedure (Creswell, 2012).

### **Instruments**

In collecting data, Multiple Intelligences Development Assessment Scale (MIDAS) made by Branton Shearer was used. It was chosen as the instrument of this research because ‘‘MIDAS was developed over a period of six years using combination of rational and empirical methods of test construction using Multiple Intelligences theory as the basis to guide interpretation of empirical result ’’ (Shearer, 2002, p. 6). MIDAS also had been used in period of time to measure the kind of intelligence among the Multiple Intelligence. MIDAS was consisted of 30 statements with four response choices.

To meet the need of this research, the original version of MIDAS (see appendix A) had been modified (see appendix B) since the original version was too predictable. The main aspects that had been changed were the numberization that has been modified randomly and the form of questionnaire that had been changed from question to declaration.

In the original version, number one until number four represented the kind of musical intelligence, while in the modified version, the musical intelligence was represented by number one, 16, 19, and 27. Number five, six, and seven represented the kinaesthetic intelligence in the original version, while in the modified version those numbers were presented by number ten, eleven, and 28.

The logical-mathematical intelligence was in number eight, nine, ten, and eleven, but in the modified version those numbers had been changed into two, eight, 15, and 20 numbers.

Number 12, 13, 14, and 15 represented spatial intelligence, but those positions were modified into nine, 17, 21, and 25 numbers. The linguistic intelligence was in number 16, 17, 18, and 19. In order to make it random, the researcher had altered this position into the number of three, five, 12, and 29. The interpersonal intelligence was in number of 20, 21, 22, and 23 and then the researcher modified these numbers into 13, 22, 24, and 30 numbers. Intrapersonal intelligence was in 24, 25, 26, and 27 numbers. But, in the modified version those was altered into number four, six, 14, and 23. In the original version, naturalist intelligence was represented by number 28, 29, and 30, while in the modified version; naturalist intelligence was showed by number seven, 18, and 26.

Instrument used to get the data of students' speaking achievement was obtained by speaking score in Listening and Speaking for Career Development Classes which was measured by the lecturers of these classes. When assessing speaking, the teachers used some rubrics as a guideline to get the score. Those rubrics were fluency, accuracy, and readiness of the student.

### **Data Collecting Methods**

Prior to distributing MIDAS as the questionnaire to the participants, the researcher discussed the language used in the questionnaire with the lecturers of Listening and Speaking for Career Development classes. The language which was used in the questionnaire was English. Then, the questionnaire was distributed

into the Speaking and Listening for Career Development classes in order to get participants' answers. The way the researcher get participants' answer is by coming into the classes of Listening and Speaking for Career Development, then the researcher gave the questionnaire to the correspondents. Before answering the questionnaire, the participants were given instruction by the researcher how to fill their identities including name, gender, and student' number, and how to choose the options that available in the questionnaire. After that, the respondents filled the questionnaire independently without any coercions from the researcher or the other parts. After questionnaire has been answered by respondents, the researcher asked them to collect the questionnaire to her. Then, the researcher took the questionnaire and inputted the results of participants' responds into SPSS and Microsoft Excel. The last, kinds of data collected into analysis data was done to get the results of this study.

### **Data Analysis**

To analyze the data, researcher used Statistical Package for the Social Sciences (SPSS 22 program) and Microsoft Excel which applied the statistical formulas and the computations. The statistical formulas provide reliability, validity, normality, and missing value. Reliability is essential thing to consider in conducting a study since it is concerned with precision and accuracy of the research. Reliability allows the researcher to learn about the properties of measurements scale and the items that compose the scales (Cohen, Manion & Morrison, 2011).

Having a good validity is important key in doing a research. A good research has the validity more than 0.5. Normality shows how far the data are asymmetrical in relation to a normal curve of distribution. Seeing the normality of the research could be done by looking at the skewness and the curve. Skewness is a measure of the degree of asymmetry of a distribution (Creswell, 2012). In the skewness, the normal criterion is in interval -1 to 1. Curve determines how data is normally distributed or not. Another part that is very urgent is missing value. Missing value could be problematic in analysis and sometimes series measure cannot be computed if there were missing values. After the researcher got the those statistical formulas, the researcher combined the results with the theories in literature review in order to answer the research questions.