

## **Chapter Three**

### **Research Methodology**

In this chapter, researcher discusses the method that was used to analyze the correlation between English Education Department of Universitas Muhammadiyah Yogyakarta students' habit of listening to English songs and their motivation in learning English. This research includes research design, research setting, and population and sample. This research also discusses data collection method and data analysis.

#### **Research Design**

This research used quantitative as the method to analyze the data. According to Creswell (1994) quantitative research is a research design that used for collecting data in numerical form. Therefore, in quantitative research, the change of number can be accessed accurately.

This research has two variables which are students' habit of listening to English songs and students' motivation in learning English. Based on the two variables, the researcher used correlation design to access the data. Additionally, Creswell (2012) said that correlation research design is a static research design which explores the range or relationship between two or more variables in the same way. Moreover, this research would use explanatory design as the type of correlation design. According to Creswell (2012) explanatory design is type of correlation design that measure two variables which are the variables reflected to each other. Therefore, this research uses explanatory correlation design because this research aims to examine the correlation between EED of UMY students' habit of listening to English songs and their motivation in learning English.

### **Research Setting**

This research was conducted at Universitas Muhammadiyah Yogyakarta. More specifically, this research was conducted at English Education Department of Universitas Muhammadiyah Yogyakarta. It was easier for the researcher to access and gather the data because the researcher studied at EED of UMY when the research took place. In addition, in the future the students of EED of UMY is targeting to be a teachers so that they have to know their students' motivation in learning English. Therefore, this research was conducted in October 2016 until August 2017.

### **Population and Samples**

This section explains about population and samples of this research. Hence, the researcher presents the number of population and samples for this research. In addition, the researcher also explains the reason why the researcher chose the population and samples.

**Population.** In this research, the researcher took students batch 2016 of EED of UMY as the target population for this research as many as 91 students. According to Creswell (2012), population was a group of all individuals which have same characteristic that makes them different from the other group. Therefore, the researcher chose batch 2016 as target population because students of batch 2016 has same characteristic, namely, they were still in skill based developing in English language proficiency.

**Samples.** The samples of this research were decided from the target of population. Based on Creswell (2012), sample is the smallest part of population.

In addition, Cohen, Manion, & Morrison (2007) stated that confidence interval 5% samples for population around 91 people are minimum 79 students had to be selected. Therefore, 79 students of EED of UMY were selected as the respondents of this research with confidence level 95% (Cohen, Manion, & Morrison, 2007).

This research used random sampling technique to select the sample. In addition, this research chooses simple random sampling as the type of random sampling technique to select the sample. According to Cohen, Manion, and Morrison (2011) simple random sampling gave the same opportunity and probability of each member of population to be chose as the sample. Moreover, this research uses Microsoft Office Excel 2007 by using form of RANDBETWEEN to get the random number to select the sample. This form would manage certain numbers from 1 to 91 and this form would show the random numbers. Therefore, the random number would used to select the sample.

### **Instruments of this Research**

This research used questionnaire to gather the data. Based on Cohen, Manion, and Morrison (2011) questionnaire is an instrument to collect the data of survey information, organized the form or the structure, the form of questionnaire usually in numerical data, it was flexible the presence of the researcher and it usually can be to the point to analyze the data. In addition, this research used rating scale as the type of questionnaire (Cohen, Manion, & Morrison, 2011). Therefore, this research used two-part of questionnaire which is for accessing students' habit of listening to English songs and students' motivation in learning English.

The first part of the questionnaire was used to access the students' habit of listening to English songs. This questionnaire was made by researcher and following three expert judgments. In addition, this questionnaire consists of 15 items with three categories which are frequency, types of songs and themes of songs. Therefore, this questionnaire was conducted by researcher by using the theory of the other researchers such as Chen and Chen (2009), Millington (2011) and Shen (2009). The respondents would answer the questionnaire with four-point Likert scale. According to Creswell (2012) rating scale is respondents' response to items of instruments that the respondents' response with the option in the items with interval between the categories. The four-point Likert-scale would be shown as the following:

Table 3.1 The Response scale of students' habit of listening to English songs		
No	Rating Scale	Score
1	Always	4
2	Usually	3
3	Rarely	2
4	Never	1

The table shows the rating scale, categories and score of students' habit of listening to English songs. Moreover, the rating scale of this research consists of four points. First point of rating scale is *Always* which has 4 for the score and the highest score in this rating scale. In addition, second point is *Usually* which has 3 for the score. Moreover, the third point of rating scale is *Rarely* which has 2 for

the score. Therefore, the last point of rating scale is *Never* which has 1 for the score and becomes the lowest score in this rating scale.

The second part of the questionnaire was used to access students' motivation in learning English. This second part of the questionnaire was adapted from a paper which wrote by Clément et al. (1994) with entitled *Motivation, Self-Confidence, and Group Cohesion in the Foreign Language*. In addition, this second questionnaire consists of 20 items with two categories which are integrative and instrumental motivation. This questionnaire has been cited and used many times by people. This means that the questionnaire was reliable to use. The questionnaire was translated into Bahasa Indonesia. It was done to prevent the misunderstanding about the items' statements. The respondents would answer the questionnaire with four-point Likert scale. The four-point Likert-scale would be shown as the following:

No	Rating Scale	Score
1	Strongly Agree	4
2	Agree	3
3	Disagree	2
4	Strongly Disagree	1

The table shows the rating scale, categories and score of students' motivation in learning English. The rating scale of this research consists of four points. First point of rating scale is *Strongly Agree* which has 4 for the score and the highest score in this rating scale. In addition, second point is *Agree* which has 3 for the score. Moreover, the third point of rating scale is *Disagree* which has 2

for the score. Therefore, the last point of rating scale is *Strongly Disagree* which has 1 for the score and becomes the lowest score in this rating scale.

### **Technique of Data Collection**

The researcher distributed the two-part of questionnaire to the respondents based on internet via *Line*, *BBM*, and *WhatsApp* and researcher used *Google Form* <https://goo.gl/forms/sgAipu6pq16DFIkM2> to manage the questionnaire. In addition, these two-part of questionnaire used self-administrated questionnaire without the preference of the researcher (Cohen, Manion, & Morrison, 2011). Moreover, the researcher distributed the questionnaire on July 18<sup>th</sup>, 2017. Next, the researcher waited for respondents' response to fill the two-part of questionnaire for seven days.

### **Validity and Reliability**

This section explains about validity and reliability of items of the questionnaire. The result of validity and reliability of items was accessed using Supranto (2006) formula. Therefore, the result of validity and reliability shows in tables.

**Validity.** The items of this research were measured to see the validity. According to Creswell (2012) said that validity is the proof point of the interpretation of the test score for the proposed purpose. Therefore, the validity of the instruments will be measured by three expert judgments.

The validity of this research was known with using Aiken's formula in Supranto (2006). Aiken's formula is shown as the following:

$$V = \frac{\sum s}{n(c-1)}$$

$V$  = Validity index of the instruments       $S$  = The sum of  $s$  for the  $n$  raters  
 $s = r - I_0$        $r$  = The rating by an expert or rater  
 $I_0$  = The lowest possible rating       $n$  = Number of raters  
 $c$  = Number of categories that raters choose

This research used this formula to measure the validity of the instruments. According to Supranto (2006) score of validity index of the instruments is ranging statically from 0-1. In addition, the validity index of the instruments is categorized into three categories which are low, moderate and high (Supranto, 2006). The validity index of the instruments is low if the score is lower 0.4. Moreover, the validity index of the instruments is moderate if the score shows 0.4-0.8. Therefore, the validity index of the instruments is high if the score is higher than 0.8. Then, the items validity of first part of questionnaire which is students' habit of listening to English songs would be shown as the following:

	Rater 1	Rater 2	Rater 3	Total	Validity	Category	Information
Q1	4	3	3	10	0.8	High	Valid
Q2	4	4	4	12	1.0	High	Valid
Q3	3	4	4	11	0.9	High	Valid
Q4	4	4	4	12	1.0	High	Valid
Q5	4	4	4	12	1.0	High	Valid
Q6	3	4	4	11	0.9	High	Valid
Q7	3	4	4	11	0.9	High	Valid
Q8	3	4	3	10	0.8	High	Valid

Table 3.3 The Validity Result of Rating Score Students' Habit of Listening to English Songs							
	Rater 1	Rater 2	Rater 3	Total	Validity	Category	Information
Q9	4	4	3	11	0.9	High	Valid
Q10	4	4	4	12	1.0	High	Valid
Q11	3	4	4	11	0.9	High	Valid
Q12	4	4	4	12	1.0	High	Valid
Q13	3	4	4	11	0.9	High	Valid
Q14	4	3	3	10	0.8	High	Valid
Q15	4	4	3	11	0.9	High	Valid

Table 3.3 showed the validity index of students' habit of listening to English songs which consists 15 items. The validity index was 0.8 to 1.0. In addition, the validity index of items was high. It meant that 15 items were valid to use for this research.

The second part of questionnaire accesses students' motivation in learning English. The validity was done by calculating raters' rating score. Therefore, result would be shown as the following:

Table 3.4 The Validity Result of Rating Score of Students Motivation in Learning English							
	Rater 1	Rater 2	Rater 3	Total	Validity	Category	Information
Q1	4	3	3	10	0.8	High	Valid
Q2	4	4	4	12	1.0	High	Valid
Q3	3	4	4	11	0.9	High	Valid
Q4	4	4	4	12	1.0	High	Valid
Q5	4	4	4	12	1.0	High	Valid
Q6	3	4	4	11	0.9	High	Valid



	Rater 1	Rater 2	Rater 3	Total	Validity	Category	Information
Q7	3	4	4	11	0.9	High	Valid
Q8	3	4	3	10	0.8	High	Valid
Q9	4	4	3	11	0.9	High	Valid
Q10	4	4	4	12	1.0	High	Valid
Q11	3	4	4	11	0.9	High	Valid
Q12	4	4	4	12	1.0	High	Valid
Q13	3	4	4	11	0.9	High	Valid
Q14	4	3	3	10	0.8	High	Valid
Q15	4	4	3	11	0.9	High	Valid
Q16	4	4	4	12	1.0	High	Valid
Q17	4	4	4	12	1.0	High	Valid
Q18	3	4	4	11	0.9	High	Valid
Q19	3	4	4	11	0.9	High	Valid
Q20	3	4	3	10	0.8	High	Valid

The table showed the validity index of students' motivation in learning English which consists of 15 items. The validity index was 0.8 to 1.0. In addition, the validity index of items was high. It meant that 2 items were valid to use for this research.

**Reliability.** According to Creswell (2012) reliability is a firm and consistent of the score of instrument. This research measured the reliability after the validity of the items was done. Reliability is the instrument's score that could be trusted. Therefore, this research also provides the criteria Cronbach's Alpha to show the reliability of the instruments as the following:

Table 3.5 Criteria of Reliability of Cronbach's Alpha (Cohen, Manion, & Morrison, 2011, p. 640)	
Cronbach's Alpha	Criteria
>0.90	Very highly reliable
0.80-0.90	Highly reliable
0.70-79	Reliable
0.60-0.69	Low reliable
<0.60	Unacceptably Reliable

In this research, there were 35 items of questionnaire that were distributed to 79 respondents. The reliability of items was in Very highly reliable criteria. Therefore, the interval of Cronbach's Alpha of the questionnaire's items was 0.935 which means the questionnaire's items were Very highly reliable. The table result of reliability would be shown as the following:

Reliability Statistics	
Cronbach's Alpha	N of Items
.935	35

*Figure 3.1 Reliability Statistics of Items*

Table 3.6 Reliability of Items

Reliability of Items				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	106,53	162,278	,420	,934
Q2	106,61	156,780	,635	,932
Q3	106,94	159,470	,442	,934
Q4	106,95	156,741	,580	,933
Q5	106,71	159,363	,483	,934
Q6	106,46	158,072	,610	,933
Q7	106,42	160,554	,511	,934

Reliability of Items				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q8	106,51	161,407	,393	,935
Q9	107,56	160,686	,456	,934
Q10	106,47	159,175	,504	,934
Q11	107,03	156,922	,602	,933
Q12	106,67	158,942	,473	,934
Q13	107,37	156,364	,538	,934
Q14	107,11	154,538	,606	,933
Q15	107,16	156,729	,547	,933
Q16	106,03	161,179	,518	,934
Q17	106,19	160,797	,454	,934
Q18	106,22	160,812	,549	,933
Q19	106,16	161,088	,572	,933
Q20	106,22	159,889	,568	,933
Q21	106,11	162,769	,441	,934
Q22	107,01	159,038	,411	,935
Q23	106,33	158,070	,613	,932
Q24	106,37	159,876	,552	,933
Q25	106,09	161,569	,560	,933
Q26	106,10	162,272	,504	,934
Q27	106,15	161,105	,519	,933
Q28	105,96	162,601	,501	,934
Q29	106,25	160,422	,520	,933
Q30	106,15	159,541	,658	,932
Q31	106,13	160,291	,663	,933
Q32	106,03	161,666	,560	,933
Q33	106,09	160,646	,634	,933
Q34	106,14	161,044	,603	,933
Q35	106,46	159,277	,522	,933

Table 3.6 showed the Cronbach's Alpha scores of 35 items of the questionnaire. The Cronbach's Alpha score of 35 items was in interval of 0.932 to 0.935. The Cronbach's Alpha of reliability test was 0.935. In addition, the Cronbach's Alpha scores of 35 items of the questionnaire were lower than Cronbach's Alpha of reliability test. It could be concluded that 35 items of the questionnaire was reliable to use.

## Data Analysis

This research measures the two-part of questionnaire after distributed the questionnaire based on internet via *Line*, *BBM*, and *WhatsApp* and researcher used *Google Form* <https://goo.gl/forms/sgAjp6pq16DFlkM2> to manage the questionnaire. In addition, the data would be examined by using SPSS version 17.0 windows. Therefore, this research would be examined the data using descriptive statistic and inferential statistic.

Descriptive statistic would be used to answer the first and second of research questions which are “How is students’ habit of listening to English songs at EED UMY?” and “How is students’ motivation at EED UMY?”. In addition, the first and second research questions would be examined by using SPSS version 17.0 windows. According to Creswell (2012), “Descriptive statistic do exactly what they say: they describe and present data, for example summary frequencies” (p. 606). Therefore, this descriptive statistic would show and measure the frequencies of data, central tendency such as means, modes and median and also standard deviation.

This research would also provide the class width or class length of the class. According to Supranto (2006) class width will show the class interval. The researcher would measure and categorize the class width as the following:

$c = \frac{\text{Maxvalue} - \text{Minvalue}}{N}$	$c = \frac{4 - 1}{3} = \frac{3}{3} = 1$
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c = class width

N= Number of classes

Maxvalue = Maximal value

Minvalue= Minimal value

The form shows that the class width is 0.6. The class width will make the interval of score to identify the category of variables. This research will show the interval of score of the category of the two variables as the following:

Table 3.7 The Categories of students' habit of listening to English songs		
No.	Interval	Categories
1.	3.1 – 4	Always
2.	2.1 – 3	Often
3.	1 – 2	Seldom

The table showed the interval and the categories of students' habit of listening to English songs. The first interval is 3.1- 4, students' habit of listening to English songs in this interval was in category *Always*. The second interval is 2.1- 3, students' habit of listening to English songs in this interval was in category *Often*. The last interval is 1-2, students' habit of listening to English songs in this interval was in category *Seldom*. Based on these categories and intervals, it would show the use of frequency, types of songs and themes of songs toward listening English songs.

Table 3.8 The Categories of Students' motivation in learning English		
No.	Interval	Categories
1.	3.1 – 4	High
2.	2.1 – 3.0	Moderate
3.	1 – 2	Low

Students' motivation will be categorized as *High* if the interval is 3.1 – 4. This category shows that students' integrative and instrumental motivations in

learning are High. Second category shows that students' integrative and instrumental motivation in learning English are *Moderate* if the interval is 2.1 - 3.0. Therefore, the last category shows that students' integrative and instrumental motivation in learning English is *Low* if the interval is 1 -2.0.

The third research questions of this research is “ What is the correlation between EED of UMY students' habit of listening to English songs and their motivation in learning English?” was answered by using inferential statistic. Additionally, according to Cohen, Manion, and Morrison (2007) stated that inferential statistic is a quantitative data analysis to know the inferences and predictions from the data that gathered before. Therefore, inferential statistic analysis would also show the normality test and linearity test which consist of Pearson's product-moment correlation coefficient ( $r$ ).

Pearson's product-moment was used to measure the correlation coefficient of the variables (Gunawan, 2015). In addition, there was a range of correlation coefficient. Moreover, Cohen, Manion, and Morrison (2007) stated that the Pearson's product-moment correlation coefficient ( $r$ ) is ranging statically from -1.0 to +1.0. The correlation coefficient of -1.0 means that the perfect negative correlation between two variables. On the other hand, the correlation coefficient of +1.0 represents the perfect positive correlation between two variables. The table of correlation coefficient ( $r$ ) would be shown as the following:

Table 3.9 The Correlation Coefficient ( $r$ ) (Cohen, Manion, & Morrison, 2011, p. 636)		
No.	$r_{xy}$ Range	Categories
1.	0.85 – 1.00	Very High Correlation
2.	0.65 – 0.85	High Correlation
3.	0.35 – 0.65	Moderate Correlation
4.	0.20- 0.35	Low Correlation
5.	0.00-0.20	Very Low Correlation