CHAPTER III

RESEARCH METHODS

This chapter presents about the research methods that research use to conduct research. It consists of the research design, data and data sources, variable, methods of data collection and instruments, validity, method of data analysis, hypothesis testing, validity.

A. Research Design

Research design is overall plan that guides the data collection and analysis of the research. The researcher uses quantitative approach to answer the research problem. The design employed is correlation research. According to Fraenkel and Wallen (1993: 328) correlational research is the relationship among two or more variables are studied without any attempt to influence them. The reason of choosing this method is the researcher wants to know the strength of the relation of two variables based on correlation coefficient. There are three possible result of a correlation study:

1. Positive Correlation: Both variables increase or decrease at the same time. A correlation coefficient close to +1.00 indicates a strong positive correlation;
2. Negative Correlations: Indicates that as the amount of one variable increase, the other decreases. A correlation coefficient close to -1.00 indicates a strong negative correlation;

3. No Correlation: Indicates that is no relationship between the two variables. A correlation coefficient of 0 is indicates no correlation.

B. Data and Data Sources

The term of data refers to kinds of information researcher obtain on the subjects of their research (Fraenkel and Wallen, 2012:111). The data of this research were students' frequency of listening to English song that taken from the questionnaire that distributed to the 6th semester of English Department students in IAIN Tulungagung and their listening comprehension scores in TOEP.

C. Variable

As described in the first chapter, this research is entitled "The Correlation between the Frequency of Listening to English Songs and Listening Comprehension Scores in TOEP of English Department Students in IAIN Tulungagung". There are two kinds of variables to be investigated. They are predictor variable and criterion variables.

1. Predictor Variable

The predictor variable in this research is the Frequency of Listening to English Songs.

2. Criterion Variable

The criterion variable in this research is listening comprehension scores in TOEP of English department students.

D. Population and Sample

A. Population

A population is any well-defined group of people, events, or objects (Ary et al, 2010). It means that population refers to large group. In this research the population were the English department students of IAIN Tulungagung. In this case, the TOEP test that was conducted by the Center for Language Development IAIN Tulungagung was joined by the 6th semester of English department students, so the population was only the 6th semester of English department students.

B. Sample

According (Kenneth and Bruce, 2011:163) state that sample is a small sub group chosen from the large population. So it can be concluded that sample is small group as part of population and it also chosen as representative data of whole population. In this study, the sample of this research was a part of the population of the English department students of IAIN Tulungagung.

In this research, the researcher used stratified sampling. Stratified sampling is a technique of selecting samples in which a population is divided into groups according to some characteristics (Chojimah, 2020). The 6^{th} semester of English Education Department students at IAIN Tulungagung are divided into 7 classes. There are A class, B class, C class, D class, E class, F class, G class. From each class, the researcher took 10 random students to become the respondents.

E. Methods of Data Collection and Instruments

Data collecting method is the technique used by the researcher to obtain the data. The data was collected by:

1. Distributing questionnaire

Questionnaire is either based on a set of structured item (in which the respondent choose from a limited number of responses) or unstructured (in which open-ended question are given that a respondent can answer as he or she chooses) (Richards, 2001:60).

A questionnaire was distributed in order to demonstrate and collect data on the frequency of listening to English songs. The questionnaire was presented in the form of closed questions. The questions are in the form of a checklist. In this case, the writer uses a rating scale. Rating scales present a number of statements about a behaviour, an activity, or a phenomena, as well as a scale of categories to go along with them (Ary et al, 2010).

The researcher provided with 10 questions about the frequency of listening to English songs and had the options of 1, 2, 3, 4 and 5. 1 refers to an answer option that states that it never occurs. 2 describes as an answer option which states *seldom.* 3 describe as an answer option which states *sometimes*. 4 describes as an answer option which states *often*. 5 describes as an answer option which states *always*. The highest score of the questionnaire is 50 and the lowest is 10.

2. Document analysis

Documentation in studies refers to the technique of gathering and analyzing documents to collect data. According to Ary et al (2010) Document analysis can be of written or text-based artifacts (textbooks, novels, journals, transcripts, birth certificates, e-mail messages, etc.) or of nonwritten records (photographs, audiotapes, videotapes, YouTube videos, etc.). In this study, the documentation that was used by the researchers was the TOEP certificates of the 6th semester of English Education Department students conducted by the center for language development, IAIN Tulungagung. The data was obtained from the official website of IAIN Tulungagung in the form of a PDF.

F. Validity

Validity is the extent to which a measure actually taps the underlying concept that it purports to measure (Ary et al, 2010). There are four types of validity. They are face, content, critetrion, and construct Validity. Face validity refers to the appearance of the instrument. Whereas content validity means the instrument should meet the curriculum. Creiterion validity is the validation of an instrument by comparing it with other measurement instruments that are already valid and reliable by correlating it. In addition, construct validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by the proposed use of the test (Ary et al, 2010:638).

Similar to TOEFL, TOEP has also been developed through a series of activities, from the formulation of the purposes of constructing the test, the formulation of indicators of test items, the construction of test items, expert validation involving experts of language testing and psychometrics, to try-outs and calibration using the item response theory. This test consists of 100 items, covering 50 listening test items and 50 proficiency is represented through the scores, which range from 0 (non-user of English) to 100 (expert user). Seen from the process of its development, TOEP is standardized and has fulfilled the criteria of a good test in terms of content validity (Madya,2020)

Retnawati (2016) confirms that TOEP possesses the good criterion validity. The TOEP criterion validity is concurrent validity. This type of validity tells to what extend the result estimates the ability of another measurement instrument taken in about the same times (Fernandes, 1984). Related to the concurrent validity of TOEP, the results of this test can be used to predict the scores achieved by taking other standardized tests, such as measured through standardized tests developed by native speakers of English, for example, the TOEFL, TOEIC, and IELTS tests.

G. Methods of Data Analysis

A statistical analysis was used to analyze the data. Statistic technique of this study is correlational study. Correlational research generates indexes that demonstrate both the direction and degree of correlations between

variables, taking into consideration the complete range of variables (Ary et al, 2010).

To analyze the data of questionnaire, the researcher uses rating scale. There are 10 question based on frequency and has option never, seldom, sometimes, often and always suitable with options 1,2,3,4,5. The maximum score is 5 x 10 = 50 and the minimum is 1 x 10 = 10.

Table 3. 1 The Criteria Scores for Frequency of Listening to English Songs

Frequency of Listening to English Songs	**Score**
Never	1
Seldom	2
Sometimes	3
Often	4
Always	5

The formula to interpreting score according is follows:

Total : *score per item* x *item question*

Max. Score : 5 x 10 = 10

Criteria for interpretation of scores:

Number 0 - 10 = Never

Number 11 - 20 = Seldom

Number 21 - 30 = Sometimes

Number 31 - 40 = Often

Number 41 - 50 = Always

Meanwhile, analysing listening comprehension scores in TOEP is done by TOEP certificates of 6th semester English department students conducted by the center for language development, IAIN Tulungagung.

After gathering the data, the researcher used computer calculation of Pearson Product Moment correlation using the IBM SPSS Statistics 26 program to analyze the data. Before doing the analysis of the correlation, it is necessary to do an analysis requirement test consisting of a normality test and a linearity test.

a. Normality test

Normality testing is conducted to determine wheter the data are normal distribution or not. The researcher used IBM SPSS Statistic 26 program through Kolmogrov-Smirnov test by the value of significance (α) = 0,05. Basic decisions making in normality testing are as follows:

1. If the significance value > 0,05, then the data is normally distributed.
2. If the significance value < 0,05, then the data is not normally distributed.

b. Linearity test

Linearity testing is purposed to know whether two variables which will be done by statistical analysis correlation show the linear relationship or not. Two variables are considered linear if F-obtained is lower than F-table or if significance of F-obtained is higher than 0.05.

If the data is not linear, the regression analysis cannot be used. To compute the linearity testing, the researcher used Anova Table through IBM SPSS Statistic 26 program. Basic decisions making in linearity testing are as follows:

1. If the significance value > 0.050, then the data is linear
2. If the significance value < 0.050, then the data is not linear

H. Hypothesis Testing

The hypothesis testing is purposed to know the correlation between students' frequency of listening to English song and listening comprehension score in TOEP. The researcher used the Pearson Product Moment correlation through IBM SPSS Statistics 26 program. The statistical formulastions of the hypothesis are as follows:

1. If sig > α then H_0 is accepted and H_a is rejected. It means that there is no correlation between X and Y.
2. If sig < α then H_0 is rejected and H_a is accepted. It means that there is correlation between X and Y.

Then to find out the strength of the correlation, the degree of coefficient correlation can be seen in the table below:

Table 3. 2 The Guide to Give Interpretation Coefficient Correlation

Coefficient Interval	Correlation Level
0,00 - 0,199	Very Low
0,20 - 0,399	Low
0,40 - 0,599	Enough
0,60 - 0,799	High
0,80 - 1,00	Very High

From the table above it can be concluded that if the coefficient correlation in the interval (0,00-0,199), the correlation level between 2 variable was very low. The interval of the coefficient correlation 0,20 – 0,399 means that the correlation level was low. The interval of the coefficient correlation 0,40 – 0,599 means that the correlation level was enough. The interval of the coefficient correlation 0,60 – 0,799 means that the correlation level was high. The interval of the coefficient correlation 0,80 – 1,00 means that the correlation level was very high.