

CHAPTER III

RESEARCH METHODOLOGY

This chapter was consisted of Research Type, Research Design, Place and time of the study, Population and sample, Research Instrument, Data collection procedure, and Data analysis

A. Research Type

The type of this research was descriptive quantitative. This research was purely quantitative with questionnaire as the main instrument to obtain the data which was in the form of numerical in the statistic analysis. While descriptive was used to describe the data that was obtained from interview as a secondary instrument. Descriptive research can be either quantitative or qualitative. It can involve collections of quantitative information that can be tabulated along a continuum in numerical form.¹

B. Research Design

The research design of this study was survey research. In survey research, investigators asked questions about peoples' beliefs, opinion, characteristics, and behavior. A survey researcher wanted to investigate associations between respondents' characteristic such as age, education, social class, race, and their current attitudes toward some issues.²

According to J.D. Brown quoted by Sandra Lee Mckay, declared that language surveys are any studies "that gather data on the characteristics and views of informants about the nature of language or language learning through the use of oral interviews or written questionnaires".³

¹ AECT, *The Handbook of Research for Educational Communications and Technology*, Bloomington, 2001, (online on January 2016. <http://www.aect.org/edtech/ed1/41/41-01.html>)

² Donald Ary, Lucy Cheser Jacobs, Chris Sorensen, and Asghar Razavieh, *Introduction to Research in Education*, Canada: Wadsworth, 2010, p.372

³ Sandra Lee M., *Researching Second Language Classrooms*", London: Mahwah, New Jersey, 2006, p.35.

Based on the definition above, the writer was concluded that survey research includes in non experimental quantitative research. This purpose of this study was to collect data like opinion, believe, preference, and behavior by questionnaires as an instrument.

C. Place and Time of The Study

The study was conducted at Palangka Raya, especially at Campus of IAIN Palangka Raya on students who had taken English course. This study was observed for The Fourth Semester Students, the Sixth Semester students, and the Eighth Semester Students. This research needed a month to collect the data.

D. Population and sample

1. Population

The larger group about which the generalization is made was called *population*. Population is defined as all members of any well-defined class of people, events, or objects.

The populations were taken for this research was English Department Students who have completed listening course. They were students in academic year of 2014/ 2015 till the students in academic year of 2012/ 2013 of IAIN Palangka Raya.

Table 3.1
Number of Population of students of English
Education in State Islamic Institute of Palangka Raya Academic year 2012/2013-
2014/2015

No	Academic Year	Number
1	2014/2015	81 students
2	2013/2014	68 students
3	2012/2013	86 students
	Total	235 students

2. Sample

The small group that is observed was called a *sample*. A sample is a portion of a population. For example, the students of Washington High School in Indianapolis constitute a sample of American high school students.⁴ In collecting the data required, Random sampling was used in this sampling technique.

According to Donald Ary stated that the kinds of sampling in which every element in the population has an equal change of being selected is called probability sampling. The best known of probability sampling procedures is simple random sampling. It is that all members of the population have an equal and independent change of being included in the random sampling.⁵

Because of a simple random sampling was used in this research, a sample was taken from English students from the students in academic year of 2014/ 2015 till the students in academic year of 2012/ 20113 of IAIN Palangka Raya which number of population are 235 students. The writer was taken the samples by using Slovin's Formula as follows:

$$n = \frac{N}{1 + Ne^2}$$

n: sample

N: total population

e: error tolerance (5%)

$$\begin{aligned} n &= \frac{N}{1 + Ne^2} \\ &= \frac{235}{1 + 235 (0.05)^2} \\ &= \frac{235}{1 + 235 (0.0025)} \\ &= \frac{235}{1 + 0.5875} \\ &= \frac{235}{1.5875} \\ &= 148.03 \end{aligned}$$

⁴ *Ibid.*

⁵ Donald Ary & friends, *Introduction to Research in Education Eighth Edition*. USA: Wadsworth, 2010. p. 153

$$1 + 0.5875$$

$$= \frac{235}{1.5875}$$

n = 148.0315 to 148

Based on the result above, the writer was used error tolerance 5%, so the result is 148 students. In this study, the writer was decided to take 150 respondents, because thirty students of population used for trying out the instrument, the writer was not taken same respondents as samples.

E. Research Instrument

1. Instrument

To get the data accurately, it was important to use the instrument, for it is the tool to get the data on the field. In collecting the data, questionnaire used in this research to answer the problem of the study.

- *Questionnaires*

Based on Brown in Zoltan Dornyei, stated questionnaire is any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers.⁶ Survey questions can take a variety of forms. The two main types of questions are *open-ended* and *close-ended questions*.⁷ The close-ended question is used in this research. This type is suitable with the topic of the research which asks the students' preference toward EFL listening teaching strategies.

⁶ Zoltan Dornyei, "*Questionnaires in Second Language Research Construction, Administration, and Processing*" London: University of Nottingham, Lawrence Erlbaum Associates, Publishers, 2003, p.6.

⁷ Sandra Lee Mckey, *Researching Second Language Classroom*, , London:Lawrence Erlbaum Associates, Publishers2006 p. 37.

In compiling the results of the research, the coding has been done, because Likert scale was used, and the interval scales also was used to code the question. The questionnaire was constructed in the form of Likert scale by Zoltan Dornyei. Each response was given a number for example strongly agree = 5, agree = 4, Neutral = 3, disagree = 2, and strongly disagree = 1.

The situation is more serious when a questionnaire is administered in languages that the respondents are learning, which the case is often in applied linguistic research. It is therefore understandable that for respondents with literacy problems or with limited L2 proficiency, filling in a questionnaire can appear an intimidating task.⁸ Therefore, Indonesian language was used in questionnaire of this research. The questionnaire was adopted by Zoltan Dornyei's *Questionnaires in Second Language Research Construction, Administration, and Processing*.

2. Instrument Try Out

Before the instrument were applied to the real sample of the study, trying out an instrument. The test instrument was to gain information about the instrument quality that consisted of instrument reliability and validity. The samples of the test were 30 students. Procedures of the try out were as follows:

- a. Trying out the questionnaires to some students,
- b. Giving score to the students' answer,
- c. Then analyzing the data obtained to know the instrument Reliability and Validity using SPSS Program Version 18.

⁸ Zoltan Dornyei, and Tatsuya Taguchi, "*Questionnaires in Second Language Research Construction, Administration, and Processing*" London: University of Nottingham, Lawrence Erlbaum Associates, Publishers, 2003, p.6.

3. Instrument Reliability

The reliability of a measuring instrument is the degree of consistency with which it measures whatever it is measuring. On a theoretical level, reliability is concerned with the effect or error on the consistency of scores.⁹

In designing a survey, as in all research, it is essential for researchers to strive for reliability. In order to assure the reliability of a survey, several measures can be used. *First*, the same survey can be given on two occasions to the same individuals. Then the researcher can check to see how consistently the respondents gave the same response to the same item. *The second* way of assuring reliability is to have two forms of a survey and have individuals take both forms. The consistency of response on these two forms could again be checked. *The final* way to achieve reliability is to check the internal consistency of responses in a survey. In this case, if a survey contained several items that ask similar questions but in different forms, then the researcher can check to see how consistently the respondents have answered these questions.¹⁰

It was using Program SPSS version 18 in finding the reliability. The degree of alpha's cronbach alpha is higher than r table (0.361). The result of reliability was shown on table 3.2.

Table 3.2
Result of Reability

Reliability Statistics	
Cronbach's Alpha	N of Items
,885	18

⁹ Donald Ary, Lucy Cheser Jacobs, Chris Sorensen, and Asghar Razavieh, *Introduction to Research in Education*, Canada: Wadsworth, 2010, p.237.

¹⁰ Sandra Lee Mckey, *Researching Second Language Classroom*, , London: Lawrence Erlbaum Associates, Publishers, 2006 p. 41.

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Soal_1	67,47	47,913	,293	,885
soal_2	67,60	44,869	,529	,878
soal_3	67,40	45,214	,539	,878
soal_4	67,37	46,102	,549	,879
soal_5	67,70	42,976	,605	,876
soal_6	67,67	43,609	,606	,875
soal_7	67,43	45,013	,517	,879
soal_8	68,30	46,079	,356	,885
soal_9	68,00	44,828	,565	,877
soal_10	68,37	46,309	,402	,883
soal_11	68,23	43,633	,582	,876
soal_12	68,30	45,390	,514	,879
soal_13	68,30	47,183	,336	,884
soal_14	67,77	43,082	,671	,873
soal_15	67,57	44,668	,593	,876
soal_16	68,13	44,051	,556	,877
soal_17	67,43	45,564	,453	,881
soal_18	68,13	44,051	,556	,877

4. Instrument Validity

Validity is defined as the extent to which scores on a test enable one to make meaningful and appropriate interpretations.¹¹ Validity is the most important consideration in developing and evaluating measuring instruments.¹²

a. Content Validity

Content validity refers to whether or not the content of the manifest variables (e.g. items of a test or questions of a questionnaire) is right to measure the latent concept (self-esteem, achievement, attitudes,...) that we are trying to measure.¹³

The students in this study used questionnaires. So, the questionnaires measured the perception about listening teaching strategies. The writer measured the questionnaires level for University students by syllabus and SAP of listening course.

b. Face Validity

¹¹ Donald Ary, Lucy Cheser Jacobs, Chris Sorensen, and Asghar Razavieh, *Introduction to Research in Education*, Canada: Wadsworth, 2010, p.224.

¹² *Ibid.* p.225.

¹³ Daniel Mujis, *Doing Quantitative*, p.68.

Face validity is taken to ensure that the questionnaire is valid. Face validity is a term sometimes used in connection with a test's content. Face validity refers to the extent to which examinees believe the instrument is measuring what it is supposed to measure.¹⁴ Doing pilot study was not only to know the students' difficulties in answering the questionnaire, but also to measure the construct validity of the questionnaire. The result of validity was shown on table 3.3.

Table 3.3
Result of Validity

No.	Item	Value	Critical Value	Validity
1	Soal_1	.402	.361	Valid
2	Soal_2	.601	.361	Valid
3	Soal_3	.565	.361	Valid
4	Soal_4	.604	.361	Valid
5	Soal_5	.717	.361	Valid
6	Soal_6	.704	.361	Valid
7	Soal_7	.615	.361	Valid
8	Soal_8	.390	.361	Valid
9	Soal_9	.592	.361	Valid
10	Soal_10	.449	.361	Valid
11	Soal_11	.717	.361	Valid
12	Soal_12	.568	.361	Valid
13	Soal_13	.398	.361	Valid
14	Soal_14	.751	.361	Valid
15	Soal_15	.663	.361	Valid
16	Soal_16	.549	.361	Valid
17	Soal_17	.508	.361	Valid
18	Soal_18	.549	.361	Valid

¹⁴ *Ibid.*p.228.

F. Data collection procedure

There were two basic data-gathering techniques in survey research: interview and questionnaire.¹⁵ In this research, the questionnaire was used as instrument to collect the data.

To collect the objective data, this research had several steps as follows:

1. Preparing the questionnaire.
2. Trying out the questionnaires.
3. Giving the questionnaire to the respondents.
4. Collecting the responses.
5. Calculating the result of responses.
6. Analyzing the data obtained using SPSS Version 18.
7. Concluding the students' preference toward EFL listening teaching strategies at English Education Study Program in State Islamic Institute of Palangka Raya.

G. Data analysis

After the all data have been collected, the next step was analyzing the data. To analyze the data obtained from the field, several techniques were conducted, namely data reduction, and data displaying.

1. Data Reduction

In this research, interval scale is used and collecting the data by using the questionnaires both of the close-ended and Likert type questions. This research was about students' perception which is known as attitudinal information. Often attitude scales on a questionnaire are also treated as interval scales.

There were three steps to analyze the data; they were item scores, the distribution of frequency, and then central tendency. To analyze the data, below were the steps applied:

¹⁵ Donald Ary, Lucy Cheser Jacobs, Chris Sorensen, and Asghar Razavieh, *Introduction to Research in Education*, Canada: Wadsworth, 2010, p.379.

- a. Collecting the main data (item score/responses);
- b. Arranging the collected score into the distribution of frequency of score table.
- c. Calculating Mean using formula, Median, and Modus.

1) Mean

$$\bar{X} = \frac{\sum X}{N}$$

Where:

\bar{X} = Mean value

Σ = Sum of

X = raw score

N = Number of case. ¹⁶

2) Median

The median is defined as that point in a distribution of measure which 50 percent of the cases lay¹⁷.

$$\text{Mdn} = 1 + \frac{\frac{1}{2}N - fkb}{fi} \times 1$$

Where:

Mdn : Median

N : Number of Case

Fkb : Cumulative frequency located in under interval
Contain median

Fi : Authentic frequency (frequency of score contain
Median)

¹⁶ *Ibid*, Donald Ary, et al, *Introduction to Research...*, p.109.

¹⁷ *Ibid*, p.110

I : Interval Class

3) Modus

The mode is the value in a distribution that occurs most frequently¹⁸.

Example:

$$Mo = 1 + \frac{fa}{fa + fb} \times i$$

Where:

Mo : Modus

Fa : Frequency located in above interval contain modus

Fb : Frequency located in under interval contain modus

I : Interval class¹⁹

d. Calculating the deviation score and standard deviation using the formula:

a. Deviation Score

$$x = X - \bar{X}$$

x = Deviation Score

X = raw score

\bar{X} = Mean

b. Standard Deviation

$$S^2 = \frac{\sum x^2}{N-1}$$

$$s = \sqrt{\frac{\sum x^2}{N-1}}$$

$$s = \sqrt{\frac{\sum x^2 - \frac{(\sum X)^2}{N}}{N-1}}$$

Where =

¹⁸ *Ibid*, Donald Ary, et al, *Introduction to Research...*, p.109.

¹⁹ Hartono, *Statistik Untuk Penelitian*, Yogyakarta: Pustaka Belajar, 2011,.p.33

$\sum x^2$: sum of the squares of each score (i.e., each score is first squared, and then these squares are summed)

$(\sum X)^2$: sum of the score squared (the scores are first summed, and then this total is squared)

N : Number of cases

e. Interpreting the analysis result.

f. Giving conclusion.

2. Data Displaying

A numerical code is assigned to the data; the data needs to be recorded in some fashion. The best way to do this is in some type of a table in which a researcher identifies the respondents in the left-hand column and uses the rows in the table to list the participant's response to each item.²⁰

The writer adopted the Fukuday's way was adopted to display result in the table.²¹ The table summarizes how many respondents selected *always*, *usually*, *sometimes*, *occasionally*, and *never* in answer to the questions listed earlier. The table also included the percentage of respondents for each response and finally the mean for the question. In this research, questionnaire will use with close-ended question and Likert type scale to collect the data. Therefore, the table on this research includes the percentage of respondents for each response and finally the mean for the question.²²

The writer used questionnaires with the close-ended questions and likert type scale (Strongly agree, agree, neutral, disagree, and strongly disagree) as the instrument for collecting the data. Sandra stated that once the information is compiled in a table, it needs to be displayed in some ways. There are several possible alternatives.²³

²⁰ *Ibid*, Sandra Lee Mc.Kay, *Researching Second.....*,p.42

²¹ *Ibid*, p.44

²² *Ibid*, p.45

²³ *Ibid*, p.42

- a. *Firstly*, is to simply report the *frequency* of each response. Hence, in the example of having students rank the importance of each skill, one could simply describe how many students ranked writing as one, and how many ranked listening as one, and so on.
- b. *Secondly*, alternative is to describe the results in *percentages*. If researchers choose to describe the results in terms of frequency or percentages they could also display these results in a figure using a bar graph or pie chart. Visually displaying results in this way often makes it easier to highlight the results of the survey.
- c. *Finally*, with interval scales one could describe the data in terms of *central tendency*. As mentioned earlier, attitude scales are often treated as interval scales so that the central tendency of Likert-scale questions is sometimes calculated. The most common types of central tendency are the mean, mode, and median. The *mean* or average is calculated by adding up the scores and dividing by the number of participants. The *median* is the number in a set of numbers that represents the point at which 50% of the items are above and 50% are below. The *mode* is simply the most common number.