

## CHAPTER III

### RESEARCH METHOD

For the research method, it has several points that should be emerged to discover every part and process which aim at the research method. It puts in the list like research type, research design, population and sampling, research instrument, research instrument try out, data collection procedures and data analysis procedures.

#### A. Research Type

In this study, the method used mixed method which qualitative and quantitative were combined or mixed. Mixed method is focused on gathering and analyzing both qualitative and quantitative data in a single study.<sup>1</sup> Another definition claims that mixed method research is kind of research where the researcher mixes or combines quantitative and qualitative techniques, method, approaches, concepts or language into a single study.<sup>2</sup> These two definitions allow the understanding of mixed method is served in a simple explanation that mixed method is class of research which in data has two both quantitative and qualitative.

#### B. Research Design

Research design is a specification of operation for testing a hypothesis under a given set of conditions.<sup>3</sup> It is very persuade to consider that research design is a crucial part in conducting research. In this research, the writer uses a form of mixed method where survey research is used. Sandra states that survey is spesifically thought as written questionnaire

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<sup>1</sup>John W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approach*: Second Edition. p. 240

<sup>2</sup>R. B. Johnson and A. J Onwuegbuzie. *Mixed Method Research: a Research Paradigm Whose Time Has Come*. 2004. P. 17

<sup>3</sup>Bruce W. Tuckman, *Conducting Educational Research*, (US: HBJ, 1978), p. 13

and it is clearly different with interview.<sup>4</sup> In one line, survey is a procedure used by the researcher to describe the attitudes, opinions, behaviors, or characteristics of the population.<sup>5</sup> The writer gave a view that survey is method of research which the researcher want to find the opinions, behaviors, feelings of the people. Both survey and interview are different.

In descriptive survey research, there are few common characteristics in it:

1. A pre-established instrument has most likely been developed by the researcher.
2. Most responses to the questions on the survey are quantitative (e.g., ratings) or will be summarized in a quantitative way.
3. The sample is selected from a larger population or group to allow the study's findings to be generalized back to the larger group.<sup>6</sup>

## **C. Population and Sampling**

### **1. Population**

Research need object to be scrutinized as we call population and sample. Population is whole components that you are interested in modestly.<sup>7</sup> In addition, population is a group of people whom the survey is about.<sup>8</sup> It is clear to be caught the meaning of population as entirety of people who becomes the object of the research.

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<sup>4</sup>Sandra Lee Mckey, *Researching Second Language Classroom*, Lawrence Erlbaum Associates, Inc., Publisher, 2008. p. 35

<sup>5</sup>John W. Creswell, *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research*, Boston: Pearson Education Inc. 2012. p. 376

<sup>6</sup>Marguerite G. Lodico, Dean T. Spaulding, Katherine H. Voegtler, *Method in Educational Research*, San Francisco: Jossey-Bass a Wiley Imprint, 2006, p. 156-157

<sup>7</sup> Thomas F. Burgess, *A General Introduction to the Design of Questionersfor Survey Research*, University of Leeds, 2001, p. 4

<sup>8</sup>ZoltanDornyei and Tatsuya Taguchi, *Questioners in Second Language Research*, New York: Routledge 270 Madison Evanue, 2010, p. 60

The population in this research was all of students on XI grade at SMAN-1 Palangka Raya, it was consisted of Science class, social class, and language class.

## **2. Sample**

It is different with population. Sample is a portion of population. It is a small group of people that is observed. For this research, the students of XI grade at SMAN-1 Palangka Raya were the population, and students in class XI Bahasa 1 and XI Bahasa 2 of SMAN 1 Palangka Raya were the sample.<sup>9</sup> In this time, sample is certain object that is researched.

In this research, the writer used cluster sampling. Cluster sampling is units (e.g. geographic regions, schools) that contain members of the population are identified. These units called “cluster” are than randomly sampled, and within each sampled cluster either all people or randomly chosen people are selected to participate in the survey<sup>10</sup>. In the simple definition, cluster is a grouping of the members of the population<sup>11</sup>. This research was factually prepared with the sample in a group of classes where the students in it.

## **D. Research Instrument**

The main thing should be prove our study is data. The writer used questionnaires and interview to obtain the data, but it was not enough by doing that instruments, the writer also used video recording to make it complete as a prove.

### **1. Questionnaire**

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<sup>9</sup> Donald Ary, et al, *Introduction to Research in Education*, Wadsworth: Wadsworth Cengage Learning, 2010, p. 148

<sup>10</sup> Michael W. Passer, *Research Method: Concepts and Connections*, New York: Worth Publishers, 2014. p. 206

<sup>11</sup> Sharon L. Lohr, *Sampling: Design and Analysis. Second Edition*, Boston: Brooks/Cole Cengage Learning, 2010. p. 166

Questionnaire is distributed to the person concerned with a request to answer the question and return the questionnaire. A questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is mailed to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself. The respondents have to answer the questions on their own.<sup>12</sup>

In this research, the writer used likert scala as the kind of questionnaire. A likert scale shows a set of statements of the topic and asking the respondent to chose whether they strongly agree, agree, are undecided, disagree, strongly disagree.<sup>13</sup> A likert scale provides a range of responses to a given question or statement.<sup>14</sup> By the statement above, the writer opted this kind of questionnaire to make the research takes short time in analyzing and low budget.

Equally important, the rules in constructing items of questionnaire should be available. Zoltan claims that there are several points as a precept to write good items. These points warn the writer to present the questionnaire nicely to the respondents.

a). Short and simple items

The writer should provides the items with simple sentences, not in complex or compound sentences. It also transpires to the words used by the writer, do not make it exceed 20 words.

b). Simple and natural language

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<sup>12</sup> C. R. Khotari, *Research Methodology, Methods and Technique*, New Delhi: New Age International Limited, 2004, p. 100.

<sup>13</sup> Donald Ery, et al. *Introduction to Research in Education*. Wadsworth: Wadsworth Cengage Learning, 2010, p. 209

<sup>14</sup> Louis Cohen, et al. *Reserch Methods in Education: Fifth Edition*, London: Routledge Falmer. p. 253

Choose to say something in a simple way. Keep in clear and direct without any acronyms, abbreviations, proverbs, jargon or technical terms.

c). Avoid ambiguous or loaded words and sentences

Words that indicate something ambiguous or unclear need to be avoided. The writer also notify the respondents with neutral questions.

d). Avoid negative constructions

It could be a problem to the respondents if the items contain a negative constructions.

e). Avoid double-barelled questions

Double-barelled questions are the questions that ask two or more ideas in one while expecting a single answer. For instance, the question “How are your parents?” asks about one’s father and mother, it could not be answered simply if one of them is well and the other unwell.

f). Avoid items that are likely same answer

In rating scale, it should be avoided the statements that are probably approved by almost everyone or almost no one.

g). Include both positively and negatively items

In order to avoid a response set in which the respondents mark only one side of rating scale, it is worth including in questionnaire both positively and negatively items.<sup>15</sup>

For the questionnaire, the writer classified the items based on the specification among them. It was included the 16 items which was distributed to the students.

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<sup>15</sup>Zoltan Dornyei and Tatsuya Taguchi, *Questioners in Second Language Research: Construction, Administration, and Processing, Second Edition*. New York: Routledge 270 Madison Evanue, 2010 p. 41-43

Shortly, item 1, 2, 3 and 4 were the items that conveyed a statement about the using English, Indonesia or both of them in the class by the teachers. Then item 5 and 6 talked about the allowance of using Indonesia in the class. Item 7 and 8 discussed about the improvement of English skill if the teachers used English or Indonesia. Item 9 and 10 asserted the idea about the communication and interaction among the students, whether they used Indonesia or English. Then item 11, 12 and 13 mooted the students' understanding and comprehension about the material if the teachers used English, Indonesia or both of them. The last, item 14, 15 and 16 took up the fact in the class or the real condition when the teachers taught, whether they used English, Indonesia or combined it.

To make it strong about the questionnaire which was given, it needed more than just marked their respons toward the items. In this part, the writer also handed over the authority to the respondent to write their reason why they mark the responds they chose.

## **2. Interviews**

Interview is asking participants questions in one on one or small group setting.<sup>16</sup> Interviews can allow researchers to investigate phenomena that are not directly observable, such as learners' self-reported perceptions or attitudes.<sup>17</sup> As a consideration, the writer thought that was necessary to put interview in one of the instrument applied. In order to support the questionnaire that was given to the students, teachers' sight was covered in interview where the teachers would be as respondent of study.

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<sup>16</sup> Dana Lynn Driscoll, *Introduction to Primary Research: Observations, Surveys, and Interviews*, Library of Congress Cataloging in Publication Data, Vol. 2, 2010, p. 154

<sup>17</sup> Alison Mackey and Susan M. Gass, *Second Language Research*, New Jersey: Lawrence Erlbaum Associates Publisher, 2005, p. 173

### 3. Video Recording

Another instrument which is provided here was video recording. A video camera is focused in certain point. In a large classroom, it cannot take everything inside it. If it moves around the classroom, it will get an impression of what is going on, but will not pick up much data that can actually use for analysis. A video camera may be used to focus on the teacher's behaviour. When used to record students, it is the best to select a small group, carrying out an activity in which they do not need to move around too much.<sup>18</sup> Moreover, video can help to uncover the subtle reality of classroom life.<sup>19</sup>

### E. Research Instrument Try Out

Before the questionnaire was distributed to the respondents. The conclusiveness of the items which was going to be answered should be measured in order to know the validity and reliability. The writer made the questionnaire in several items, but it did not prove whether all items having a standard or not. However, if the writer wanted to try out the questionnaire, some steps usually are required<sup>20</sup>:

- Select three or four people who are motivated to spend some time to help the researcher and whose opinion valued. Some of them should not be specialist in the field and may be some people who are accustomed to survey research or who know target population well.
- Ask them to go through the items and answer them, and then to provide feedback about their reaction and the answers they have given. The best method to conduct this phase is for the writer to be present while they are working. This way the

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<sup>18</sup>The Open University Master Programme in Education, Research Method in Education: Handbook , p. 223

<sup>19</sup>Zoltan Dorney, Research Methods in Applied Linguistics, Oxford University Press. 2007, p. 185

<sup>20</sup>Zoltan Dorney and Tatsuya Taguchi, *Questioners in Second Language Research: Construction, Administration, and Processing, Second Edition*. New York: Routledge 270 Madison Evanue, 2010. p. 55

researcher can observe their reaction and can note and respond to any spontaneous questions or comments.

- Once they have gone through all the items, ask for any general comments and can initiate a brainstorming session.

## **1. Validity and Reliability**

In conducting survey research, as in others research, validity and reliability of instrument is needed. Validity is the degree to which the evidence and theory support the interpretations of test scores entailed by proposed uses for tests.<sup>21</sup> For example, a questionnaire designed to obtain general information from staff about their views of the role of governors in the local management of schools might instead tap individual opinions about particular governors' ability to administer school resources. In this case you would not have a valid measure of the topic you are interested in.<sup>22</sup> In questionnaire, to measure the validity is whether respondent who complete the questionnaire do so accurately, honestly and correctly and second whether those who fail to return their questionnaire would have given the same distribution of answer as did the returns.<sup>23</sup> An interview in other hand, one way of validating interview measures is to compare the interview measure with another measure that has already been shown to be valid. If the two measures agree, it can be assumed that the validity of the interview is comparable with the proven validity of the other measure.<sup>24</sup>

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<sup>21</sup>Donald Ery, et al. Introduction to Research in Education. Wadsworth: Wadsworth Cengage Learning. 2010. P. 225

<sup>22</sup>The Open University Master Programme in Education, Research Method in Education: Handbook , p. 125

<sup>23</sup>Louis Cohen, et al. Research Methods in Education: Fifth Edition, London: Routledge Falmer. 2000. p. 128

<sup>24</sup>*Ibid.* p. 121



Reliability as a second thing to measure the instrument, is the degree of consistency with which it measure whatever it is measuring.<sup>25</sup> The findings, should be similar if you chose to repeat your instrument on the same people on a different occasions or you were to carry. For example, in order for a questionnaire to qualify as reliable, a person's answer to the questions should be the same if he or she is asked to complete it a second time. If their answers are not the same, it may mean that the questions are ambiguous and do not provide reliable information.<sup>26</sup>

In this research, to measure validity and reliability of instrument, the writer used SPSS23 Program.

In short, the writer did try out to the questionnaire before it distributed to the students. In this research, students of XI grade of language class at SMAN 4 Palangka Raya were defined by the writer. The writer picked up 5 of them to face the questionnaire. The reason of the writer selected them as a sample of try out because they are in same grade and class with the students whom the writer wanted to research it.

In the beginning, the writer had 18 items in questionnaire where it was regarded to get important points of the students' perception. In the same manner as the other writers did, the writer got the result as follows:

In the tryout of validity, the writer seen almost many of the items were valid. There were only two items contained invalid things, which were item 11 and 12. In other hand, the writer also did reliability measurement. The result was showed most of the items were reliable but two of the items were not reliable, they were item 8 and 12.

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<sup>25</sup>Donald Ery, et al. Introduction to Research in Education. Wadsworth: Wadsworth Cengage Learning, 2010. p. 236

<sup>26</sup>The Open University Master Programme in Education, Research Method in Education: Handbook , p. 125

From the fact, the writer considered to delete some items that would be as obstacle to obtain the valid data when the real research will be conducted. Finally, the writer omitted item 11 and 12 where the items were invalid in tryout. The writer only focused on those two items and considered other items were important point to keep it in the questionnaire.

## **F. Data Collection Procedures**

The survey was distributed in one way which the questionnaire spreads to the students of SMAN-1 Palangka Raya. For the simple detail, it can be seen from the steps below:

1. The writer provides in the questionnaire.
2. The writer hands over the questionnaire to the respondents.
3. The writer does interview to the respondents.
4. The writer collects the responses.
5. The writer does sums about the result of the research.
6. The writer analyzes the data obtained using table, SPSS and to measure the central tendency.
7. The writer forms the result into a knot.

## **G. Data Analysis Procedures**

### **1. Data Collecting**

All instruments that was given to the respondents was collected after the writer did the research. Meanwhile, the instruments were collected in order to make it in one field, so that the instruments henceforth were measured by the writer. The writer collected the instruments which the questionnaire spreaded to the students and the writer did the

interview to the teacher. Equally important, video recording encompassed the activity in the classroom while the teacher and the students did the interaction inside it.

## 2. Data Compiling

In research, the writer used interval scale and collected the data by using the questionnaires both of the close-ended and likerttypes 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. For example, frequently when Likert-scales are used, each response is given a number (e.g., strongly agree = 1, agree = 2, disagree = 3, and strongly disagree = 4) and these numbers are treated as interval scales.<sup>27</sup>

The writer analyzed the data in three steps. There were item scores, the distribution of frequency, and then central tendency. To analyze the data, the writer applied the steps as follows:

- a. The writer collected the main data.
- b. The writer arranged the collected score into the distribution of frequency of score table.
- c. The writer calculated Mean using formula, Median, and Modus.

1) Mean

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

Where:

Mx = Mean value

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<sup>27</sup>Sandra Lee Mckey, *Researching Second Language Classroom*, Lawrence Erlbaum Associates, Inc., Publisher, 2008, p. 42.

$\Sigma fx$  = Sum of each midpoint times by it frequency

$N$  = Number of case<sup>28</sup>

## 2) Median

The median is defined as that point in a distribution of measure which 50 percent of the cases lie<sup>29</sup>.

## 3) The Modus / Mode

The mode is the value in a distribution that occurs most frequently<sup>30</sup>.

d. The writer calculated the deviation score and standard deviation using the formula:

### 1) Deviation Score

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

$x$  = deviation score  
 $X$  = raw score  
 $\bar{X}$  = mean

### 2) Standard Deviation

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

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

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

$N$  = number of cases

e. The writer interpreted the analysis result.

f. The writer gave conclusion.

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<sup>28</sup> AnasSudijono, *PengantarStatistikPendidikan*, Jakarta: PT. RajaGrafindoPersada, 2008, p. 85.

<sup>29</sup> *Ibid*, p.110

<sup>30</sup> *Ibid*, p.111

### **3. Data Displaying**

Coding categories is the first thing to do for the researcher when decide compiling survey research. The writer assigned a numerical code to the data, the data needed to be recorded in some fashion. The best way to do this was in some type of a table in which the writer identified the respondents in the left-hand column and used the rows in the table to list the participant's response to each item<sup>31</sup>.

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<sup>31</sup>Sandra Lee Mc.Kay, *Researching Second.....*,p.42