

## CHAPTER III

### RESEARCH METHODOLOGY

#### A. Reseach Design

Kumar (2006:79) states that research methodology involves the systematic procedures by which the researcher starts from the initial identification of the problem to its final conclusions. In addition, according to Nunan (1992:232) research is a systematic process of inquiry consisting of three elements or components, they are: question, problem, hypothesis; data; analysis and interpretation of data.

This research was correlation research, As stated by Hartono (2008:75), correlation is relationship between two or more variables. The researcher used a questionnaire to measure the students' metacognitive knowledge as "X" variable and listening test to find out the listening comprehension which is symbolized as "Y" variable.

#### B. Time and Location of the Research

The research was conducted at Vocational High School Telkom Pekanbaru which is located at Melati-Esemka street 05 Pekanbaru. It was conducted on April 2017.

#### C. Subject and Object of the Research

The subject of this research was eleventh grade students of Vocational High School Telkom Pekabaru. The object of this research was the correlation between students' metacognitive knowledge and their listening comprehension.

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## D. Population and Sample of the research

### 1. Population

Sugiyono (2011:117) stated that population is the generalisation area which consists of object or subject that has sure quality and characteristic that is determined by the researcher to be learned and to be extracted the conclusion. According to Syafi'i (2015:108), population of the research refers to total number of subjects from which or whom you obtain the data. On the other hand, population is a group of subject who has similar characteristic. The population of this research is the students of SMK Telkom Pekanbaru at the eleventh grade which is 250 students in 7 majors.

**Table III.1**  
**Population**

Class	Major		Number of population
XI	TKJ	1	30
		2	25
	TKR		32
	TSM		31
	AK/ADP		30
	TELKOM		38
	ELEKTRO		34
	PH		30
<b>TOTAL</b>			<b>250</b>

### 2. Sample

Sample refers to the population or subjects chosen or determined as the “sources of data or information” that the researcher needs in the research project. To determine sample of the research, the researcher used simple random sampling technique. It is simple because taking the sample

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from the population was done by random without looking at the levels, Sugiyono (2014:120). According to Arikunto (2006:134), if population is less than 100 respondents, it is better to take all of. However, if population is more than 100 respondents, we can take 10% - 15% or 20% - 25% or more than. Therefore, the researcher took 15% as the sample. So, the sample of this research was 38 students.

### E. Technique of Collecting Data

The data of this research collected by using some techniques, they are as follows:

#### 1. Questionnaire

It is a research instrument consisting of a series of questions to be answered by the respondents. It was to collect the data about students' metacognitive knowledge, which include planning, monitoring, problem solving, evaluating. The researcher gave a questionnaire to the students which contains 20 items. It was taken from Vandergrift, et al (2012: appendix 287)

**Table III.2**  
**Blue Print of Metacognitive Knowledge**

<b>Kinds of questions</b>	<b>Number items</b>
Planning	1, 3, 8, 10, 20
Monitoring	2, 6, 12, 16, 17
Problem Solving	5, 7, 9, 13, 19
Evaluating	4, 10, 14, 18, 15

#### 2. Test

This method is used to find out the students' score in listening comprehension. Therefore, the researcher used test as an instrument. According to Brown (2003:3), test is a method of measuring a person's

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ability, knowledge, or performance in a given domain. The researcher have given twenty questions to the students in a form of multiple choice.

**Table III.3**  
**Blue Print of Listening Comprehension**

Kinds of the questions	Number of the questions
Understand some expressions in the conversation	1, 2,3, 4, 5
Respond some expressions in the conversation	6, 7,8, 9, 10
Understand the specific information in the short text	11, 12, 13, 14, 15,
Remember the information in the announcement	16, 17, 18, 19, 20

Arikunto (2009:245) stated the classification of the students' listening comprehension score can be seen in the following table:

**Table III.4**  
**Classification of Students Score**

The score level	Category
80-100	Very good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

## F. Validity and Reliability of Instrument

According to Vandergrift (2012:256), validity refers to the extent to which a test assess what it proposes to assess. Validity is concerned with what a test measures and for whom it is appropriate. Thus, the validity of instrument is the device used to get the valid of data. Those means that the instrument can be used to measure what should to be measured.

### 1. Questionnaire

The questionnaire was taken from Vandergrift, et al (2012: appendix 287). According to Sugiyono (2009:349) it does not need to conduct validity and reliability test for a standardized instrument.

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## 2. Test

### a. Test Validity

In this research, the researcher used content validity. According to Sugiyono (2014:182), testing validity of the test-shape instrument can be done by comparing the test with the lesson which was taught by the teacher in the class. Thus, the test was given based on material studied by the students. The material of the test was taken from the syllabus of the eleventh grade of the students at Vocational High School Telkom Pekanbaru.

**Table III. 5**  
The Analysis of Listening Comprehension Test Validity

Item Number	r-item	r-table	result
1	0.45	0.32	valid
2	0.44	0.32	valid
3	0.44	0.32	valid
4	0.47	0.32	valid
5	0.45	0.32	valid
6	0.37	0.32	valid
7	0.45	0.32	valid
8	0.44	0.32	valid
9	0.35	0.32	valid
10	0.52	0.32	valid
11	0.44	0.32	valid
12	0.47	0.32	valid
13	0.47	0.32	valid
14	0.44	0.32	valid
15	0.38	0.32	valid
16	0.41	0.32	valid
17	0.50	0.32	valid
18	0.44	0.32	valid
19	0.48	0.32	valid
20	0.51	0.32	valid

From the table above, the test items were valid. Because of the items were valid, the researcher used the test to be examined to the sample of the research.

### b. Test Reliability

Reliability is to measure the instrument that is used to collect the data. To know whether the test is reliable or not, the researcher

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calculated the data obtained by using Statistical Product and Service Solution 23 service. The test reliability can be seen as follow:

**Table III. 6**  
Reliability Statistic of Students' Listening Comprehension

Cronbach's Alpha	N of Items
0.855	20

From the table above, it showed the reliability test in cronbach's alpha was 0.855, the item was 20. The coefficient reliability was in high level (0.80-0.90). The table of test reliability level was showed as follows:

**Table III. 7**  
Test Reliability Level

Cronbach Alpha	Internal Consistency
>0.90	Very highly reliable
0.80-0.90	Highly reliable
0.70-0.79	Reliable
0.60-0.69	Minimally reliable
<0.60	Unacceptably low reliability

### G. Technique of Analyzing Data

The researcher used data which was analyzed by statistical method.

This score analyzed statistically. There is significant correlation or there is no significant correlation between two or more variables that can be analyzed by using product moment correlation SPSS version 23, because likert scale is an interval data, Sugiyono (2014:134). The formula was:

$$Df = N - nr$$

Where: N = Number of cases

Nr= Number of variable

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Comparing  $r_o$  (r observasi) with the  $r_t$  (r table) by determinate:

1. If  $r_o \geq r_t$ ,  $H_a$  was accepted,  $H_o$  was rejected.
2. If  $r_o < r_t$ ,  $H_a$  was accepted,  $H_o$  was rejected.

In the following table was the category of correlation coefficient, Hartono (2008:87):

**Table III.8**  
**Table of Interpretation Correlation Coefficient Product Moment**

<b>R Product Moment</b>	<b>Interpretation</b>
0.00 – 0.200	Very Low
0.200 – 0.400	Low
0.400 – 0.700	Medium
0.700 – 0.900	Strong
0.900 – 1.000	Very Strong