CHAPTER III
RESEARCH METHODOLOGY

Collecting and analyzing the information to improve the understanding of a certain topic in a particular field is the essence of a research (Creswell, 2012). In general, this research implemented the quantitative approach. The details of the research methodology will be discussed in the following section.

A. Research Design

A research design, according to Creswell (2012), is the set of techniques used in quantitative, qualitative, and combination research, and it includes data collecting, data processing, and reporting the results or findings of the study. Following this, cross-sectional survey was implemented in this research. It looks at a smaller group of people (samples) from a larger group of people (population) at one moment in time (Ary et al., 2010). On top of that, this descriptive research is quantitative in nature as it intends to uncover patterns in attitudes, beliefs, behaviors, and traits of a big group of people toward specific subjects or concerns (Creswell, 2012).

1. Population and Sample

Population and sample are a vital part in research. A population is a group of people who share certain features and live within the same community (Creswell, 2012). For this research, the population was the students within the environment of English Education Study Program of IKIP PGRI Pontianak.

2. Sample Size and Sampling Technique

As representatives of the population, a smaller sample of people are chosen to be investigated further (Ary et al., 2010). For this research, convenience sampling was the most suitable technique for the sample selection process. This non-probability sampling determines the

participants based on their availability and willingness to partake in the research

(Creswell, 2012). Thus, active students in IKIP PGRI Pontianak currently majoring in English Education Study Program were the selected samples. Furthermore, several variations were also involved to discover the demographic of the respondents. The additional details of the respondents were about genders, class, academic year, school of origin, region of origin, and age groups.

B.   Technique of Data Collection

This research utilized internet survey as the means for the data collection process. According to Ary (2010), an internet survey is a form of survey in which the data collecting tool(s) are posted on a website set up by the researcher and the respondents obtain the access to answer the questions and submit the completed questionnaire online. The preferred website which hosted the internet survey was Google Form and the link was distributed through Whatsapp along with the consent form and the guidance regarding the technicalities about how to fill in the survey.

C.   Tool of Data Collection

The data for this research was collected from a questionnaire given in an internet survey hosted on Google Form. The questionnaire was adopted from a well-established instrument known as Metacognitive Awareness Inventory (MAI) which was created by Schraw and Dennison (1994). There are two main factors of metacognitive awareness that are addressed in this instrument, which are: Knowledge of Cognition and Regulation of Cognition. Furthermore, three indicators are utilized for Knowledge of Cognition, while five indicators are included in Regulation of Cognition.

In addition, there were 52 items in total which represent the indicators the in the questionnaire. The following tables illustrate the blueprint of the indicators and items.

Table 3.1. *Indicators for Knowledge about Cognition*

Factor	Indicators	Item Number	Total Item
Knowledge about Cognition	Declarative Knowledge	1, 2, 3, 4, 5, 6, 7, 8	8
	Procedural Knowledge	9, 10, 11, 12	4
	Conditional Knowledge	13, 14, 15, 16, 17	5
		Total Items	**17 Items**

Table 3.2. *Indicators for Regulation of Cognition*

Factor	Indicators	Item Number	Total Item
Regulation of Cognition	Planning	18, 19, 20, 21, 22, 23, 24	7
	Information Management Strategies	25, 26, 27, 28, 29, 30, 31, 32, 33, 34	10
	Comprehension Monitoring	35, 36, 37, 38, 39, 40, 41	7
	Debugging Strategies	42, 43, 44, 45, 46	5
	Evaluation	47, 48, 49, 50, 51, 52	6

In order to provide easier understanding and better sequence, the items were re-arranged from the original MAI based on their respective indicators.

3. **Validity and Reliability of MAI**

The 52-item inventory had been put to test into two experiments done by Schraw & Dennison (1994). Based on the statistics discovered, it has been found that the factors (knowledge about cognition and regulation of cognition) were reliable and inter-correlated. This has also been proven by adequate amount of studies exploring the reliability and validity, such as the one conducted by Young and Fry (2008).

4. **Procedure of Collecting the Data**

The data collection process was executed by utilizing questionnaire via Google Form, from which the findings were reported and thoroughly analyzed. The respondents were made aware of their rights and the purpose of the research from the consent form that was made available within the questionnaire to ensure their willingness in participating in this research. All 52 items were included in the questionnaire, and simple criteria were utilized by assigning Yes and No as the options to pick from.

D. **Technique of Data Analysis**

Once the data collection process was completed, the responses from Google Form were compiled in a spreadsheet and thus were analyzed. Due to the quantitative nature of this research, it would undergo process based on the description from Creswell (2012) and Ary et al. (2010) in which the interpreted numerical data would be organized into a manageable form. Moreover, the responses were subjected to descriptive statistics, which

provides a quantitative description or overview of characteristics taken from a range of evidence (Mann, 1995). A more detailed explanation of the data analysis process will be explained below.

1. The response for "Yes" was assigned 1 and "No" was assigned 0.
2. The average score for each item was calculated by dividing the total score with the total amount of respondents (420).
3. The average score of eight indicators of metacognitive awareness was identified.
4. The overall level of metacognitive awareness was calculated by finding the average score between the two main factors; Knowledge of Cognition and Regulation of Cognition.
5. An analysis of which one is the most dominant among the indicators and factors was conducted.

An analysis of which one is less applied among the indicators and factors was conducted