CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the methodology employed in this study to facilitate the understanding of the research process derived from the previous chapters. It basically covers six main groups of information. Those include, research design, research site and participants, research instruments, data collection process, data analysis, and ethical consideration.

3.1. Research Design

This study used mixed-method design to reveal the current investigation of students' academic writing and attitudes by implementing metacognitive strategies to fulfill the research purposes. The previously described research design is seen to be suitable for this study since it may make it easier to gather more comprehensive students' data on their metacognitive strategies in EFL writing, both in quantitative and qualitative forms (Fraenkel & Wallen, 2009). As implied in the name of the selected design, the two forms of data were used in this research for the purpose of triangulation. In data analysis stage, various types of information in the two sets of data were compared, until similarities and differences were found to be further used as the basis for drawing some interpretations about students' metacognitive strategies in EFL writing (Gay et al., 2009).

The analysis process was conducted using a mixed-method design approach that ensured equal consideration was given to both quantitative and qualitative data (Creswell, 2009). This meant that the two data sets were analyzed separately, providing themes that were established both quantitatively and qualitatively. The convergent interpretation was produced by comparing the two sets of themes after the separate analysis was completed. Once the matched themes were identified, the qualitatively created themes were refined using quantitatively determined themes validated by the percentages of students' answers to the questionnaire items. Alternatively, the quantitatively developed themes were expanded upon using the qualitatively developed themes.

The interpretation of the quantitative and qualitative data was achieved by critically evaluating certain contextual factors and examining the relevant

academic literature when their themes differed in some unique cases. For instance, quantitative data showed that students were unable to use any time-planning strategies. However, it was discovered through the analysis of qualitative data that students used the Google Translate app to quickly translate their content from Indonesian into English to complete the writing assignment. The researcher critically examined the rationale behind students' use of an online translation application by making a connection to the relevant theory in order to address these two distinct themes that fall under the same category—time planning skills. This consideration finally came to a conclusion that the students probably were not used to writing a text directly in English, which further implied that process approach was not consistently applied during their learning of EFL writing.

3.2. Research Site and Participants

This section included a discussion of the research site and the research participants used in this study. The research site is part of the English Education Study Program at a private university in North Sumatera, Indonesia. There were several rationales why this research site was chosen. Firstly, the accessibility which means that I, as the researcher, intended to get to the research location fast and increase its sustainability. I have been a teaching assistant in the study program for around eight years. My familiarity with the research environment was intended to advance the natural study. It was designed to stop any extraordinary behavioral outcomes from occurring in students while they were aware of the study. To obtain authentic and reliable data, I employed observation to document every activity that took place in the classroom. Additionally, this method was employed to prevent bias in data collection, ensuring that the data could not be modified. Observation was utilized in this study to obtain natural data that arises during the learning process. The second reason was due to the fact that writing was one of the more challenging subjects as discussed with the other writing teachers and the students, leading me to implement metacognitive strategies to help students become more successful and autonomous writers who see writing as one of their responsibilities as university students.

The ability to use a variety of writing topics as the study sample was another rationale for choosing the tertiary level. One of these topics, Expository

and Argumentative Essay writing classes, was used in this study. As one of the two introductory writing courses that aimed to lay a strong foundation for preparing students for more specialized writing courses like writing for professional contexts and writing for academic purposes, hopefully, this study could assist the students in learning to write from the beginning level in and outside the classroom to improve their learning in writing.

In order to gather data for a study that will answer specific research questions, participants refer to human subjects or those participating in research as targets for examination, evaluation, and interviews (Coleman, 2005). Twenty-two students participated in the study during the third semester of their bachelor's degree program, which lasts for at least eight semesters at the research site. The students were selected as research participants for the following three reasons. First, most of them had poor English proficiency scores according to their admission test results and from their second year writing results as discussed with their writing teacher. Secondly, the results of their text pre-test revealed numerous challenges in generating their English texts. Third, the students in third semester still had many difficulties with their writing education, according to the researcher's discussions with them. Many struggled with creating topic sentences and supporting details, developing their ideas, constructing sentences, and using appropriate vocabulary and grammar. As a result, when their teachers assigned them to write texts in academic and professional settings, the majority of them compiled or copied and pasted content from the internet. As a result, this study used deliberate sampling to choose a sample based on its evaluations and features.

Every participant was in the age range of 21 to 23. Before joining the class, the essay writing, they had learned paragraph writing in the previous semester. They originated from Indonesia's mixed ethnic groups and spoke various mother tongues, including Bataknese, Javanese, and other languages. For instance, the Bataknese residents of North Sumatera came from distinct cultural backgrounds. Since English is a foreign language, Bahasa Indonesia is a second language. In the class, there were seven male and fifteen female students.

In reference to the circumstance mentioned above, the class was mixed-gender; it included members with varying cultural backgrounds (ethnic, linguistic,

and age characteristics), creating a perfect setting for students to compare their writing skills to those of others (Emilia, 2005). Additionally, Lopez (2011, pp. 75) notes, "Diverse ethnicity, cultural backgrounds, gender, and language used to relate to the cultural approach." For one semester, those participants in the current study were enrolled in a standard class. Furthermore, the students were asked to fill the consent letters that described about the objectives of this study voluntarily. The University of Cambridge ESOL Examinations marking scheme was employed to examine the written outcomes submitted by the students. The outcomes were then separated into three groups: writers with high, medium, and low ability levels.

3.3. Research Instruments

To achieve the research purposes, the researcher employed five instruments, such as observations, questionnaires, reflective journals, interviews, and documents. The data for this study is gathered through mixed-methods to address the research topics. More specifically, to address the first and second research questions regarding the aspects of metacognitive knowledge and regulation, the researcher employed observation, Metacognitive Awareness Inventory (MAI) questionnaire, and students' reflective journals. Then, to provide the answer for the third research question regarding the students' attitude toward their analytical exposition writing, the researcher employed a questionnaire in relation to students' attitudes toward writing instruction and tasks, interviews, and documentations. In terms of fairness and practicality of their assignment, those questionnaires were chosen so that the actual data collection process would be conducted more efficiently with all students having the equal chance to report the expected information at the same time (Akturk & Sahin, 2011). Furthermore, in the quantitative method, the questionnaires were analysed by using SPSS 24 to generate percentages, validity, and reliability to measure aspects of the research (See Appendix 9 upto 14).

On the other hand, for getting the qualitative data, the researcher did the following: an observation, reflective journals, and the interview. The observation of the classroom took place during the teaching session. Subsequently, assessments were administered at the beginning, middle, and end of the

instructional regimen to ascertain whether or not their task knowledge had improved their writing abilities. After that, questionnaires were issued at the end of the program to assess the students' abilities as language learners and writers and their completion of writing assignments, writing strategies, and program responses. Five reflective journals were kept by the students during the program in order to triangulate more data regarding their self-regulation, such as their writing tasks, and knowledge and regulation aspects. In order to validate the students' responses to the teaching program, an interview was conducted at the end of metacognitive instruction. The details of each instrument as well as the ways they are combined to collect the data which are supportive to one another, are given in the following sub-sections.

3.3.1. Observation

The first instrument that the researcher employed in this study was observation (see Appendix 8). The researcher used naturalistic observation in this investigation. According to Fraenkel and Wallen (2009), it entailed watching the participants in their natural environments. Gall et al., (2007, pp. 263) stated that "naturalistic observation provided more accurate data than that obtained from research participants, who were frequently biased by the set to give a socially desirable response." The researcher also used field observation to document the instructional activities that took place in the classroom. Additionally, "live" data from the learning activity's natural settings was gathered using it. The primary objective of the observation was to collect data that were impartial, accurate, and rich in detail (Lodico et al., 2006).

Since each participant in this study observed the data on the learning task independently, the researcher employed inter-observer reliability to record the data (Fraenkel & Wallen, 2009). The information was only gathered once to get accurate data. Additionally, the observation was used to highlight the information gathered from the other instruments.

3.3.2 Questionnaires

There were two types of questionnaires employed in this study. The first one was MAI questionnaire, and the last one was regarding the students' attitudes

(in terms of cognitive, affective, and conative) towards writing instruction and tasks. The detail of each questionnaire is explained below:

3.3.2.1 MAI Questionnaire

As the first type of questionnaires employed in this research, MAI questionnaire was administered to the students to obtain the information about their metacognitive knowledge and metacognitive regulation (See Appendix 3). The questionnaire was modified according to the need to measure metacognitive awareness of students in multiple-choice academic writing, namely completely true and not at all true. Such format was selected for the questionnaire because the information of metacognitive knowledge is considered as the accumulated knowledge acquired through the previous learning experience, which the students need to personally put into degrees to determine its accuracy. For instance, because the university students are certain that they have been interested in learning English writing since they were in high school, they can state through the metacognitive awareness questionnaire that they agree or strongly agree about the fact that they have a positive attitude towards English writing.

The questionnaire employed in this study contains 52 items which were addressed to ask students about the aspects of metacognitive knowledge and metacognitive regulation in EFL academic writing. All of the items in that questionnaire was adopted and modified based on the theory about metacognitive strategies by Schraw and Dennison (1994) which can be seen in Chapter II of this study. Furthermore, this questionnaire was translated into Bahasa Indonesia and modified by the researcher. For examples, for the Comprehension Monitoring Item number 1, "*I ask myself periodically if I am meeting my goals*" was changed to "*I regularly check to see if I am meeting my goals*"; for the Planning Item no 4, "*I pace myself while learning in order to have enough time*" was changed to "*I take it slow while I'm learning so I have enough time to learn*"; for the Information Management Strategies Item number 13, "*I consciously focus my attention on important information*" was changed to "*I carefully pay attention to crucial information*"; for the Comprehension Monitoring Item number 21*, "I periodically review to help me understand important relationships" was changed to "I regularly review to help me understand important relationships"*; for the

Conditional Knowledge Item number 29, *"I use my intellectual strengths to compensate for my weaknesses" was changed to "I cover up for my intellectual weaknesses with my strengths"*; for the Comprehension Monitoring Item number 34, *"I find myself pausing regularly to check my comprehension" was changed to "I often pause to check my comprehension."*

In order to utilize the MAI questionnaire, students had to respond to fifty-two essential statements regarding metacognitive knowledge and metacognitive regulation in academic writing. Regarding metacognitive knowledge, three domain strategies were included in it: Declarative Knowledge (statement number 5,10,12,16,17,20,32,46); Procedural Knowledge (statement number 3,14,27,33); Conditional Knowledge (statement number 15,18,26,29,35). Regarding metacognitive regulation, five domain strategies were as follows: Planning (statement number 4,6,8,22,23,42,45); Information Management Strategies (statement number 9,13,30,31,37,39,41,43,47,48); Monitoring (statement number 1,2,11,21,28,34,49); Debugging Strategies (statement number 25,40,44,51,52); and Evaluation (statement number 7,19,24,36,38,50). To make this questionnaire easier to identify, the researcher grouped the questionnaire items order by its domain as seen in the following table:

Table 3.1 Components and Items of MAI

Components	Number of Items in Each Component	Total Number of Items
Knowledge about Cognition		
Declarative Knowledge	5, 10, 12, 16, 17, 20, 32, 46	8
Procedural Knowledge	3, 14, 27, 33	4
Conditional Knowledge	15, 18, 26, 29, 35	5
Regulation of Cognition		
Planning	4, 6, 8, 22, 23, 42, 45	7
Information Management Strategies	9, 13, 30, 31, 37, 39, 41, 43, 47, 48	10
Debugging Strategies	25, 40, 44, 51, 52	5
Comprehension Monitoring	1, 2, 11, 21, 28, 34, 49	7
Evaluation	7, 18, 24, 36, 38, 50	6

Adopted from Metacognitive Awareness Inventory (MAI) by Schraw and Dennison (1994)

Once the items used to assess the students' metacognitive knowledge and metacognitive regulation were determined, the questionnaire was then tested statistically in terms of validity and reliability. Guaranteed by the test results, the

new version of the modified questionnaire was finally used in this research. Details about the adaptation and creation of questionnaire items, as well as the proof of questionnaire validity and reliability were provided in Appendix 10. In this study, the reliability is .97 which shows similar results with previous research where the reliability of MAI in EFL studies ranged from .74 to .96 (Delavarpoor & Motahedi, 2007; Marzoogh & Safari, 2009; Shahniyeilagh et al., 2012).

3.3.2.2 Students' Attitudes toward Writing Questionnaire

As the second type of questionnaires employed in this research, the questionnaire was administered to the students to obtain the information about their attitudes (in terms of cognitive, affective, and conative) toward writing instruction and tasks. The questionnaire included 4 point Likert response alternatives which represented the degree of students' agreement towards the listed statements, i.e. strongly disagree, disagree, agree, and strongly agree. The questionnaire format did not have a mid-point; students would not be led to provide ambiguous or less honest answers by choosing the mid-point (neutral) degree. Therefore, determining students' tendency of agreement towards the statements would be easier for the researcher. Additionally, as pointed out by Tsang (2012), the questionnaire containing 4-point Likert response alternatives is indeed allowed to be used as either there is or there is not a mid-point (neutral) does not affect the reliability and validity of the questionnaire.

The questionnaire consisted of twenty six items that were divided into two sections. The first one was concerning the components of attitude, such as, cognitive (statement number 1 upto 6), affective (statement number 7 upto 12), and conative (statement number 13 upto 18). On the other hand, the factors affecting attitude consisted of social environment near students (statement number 19), learners' experiences (statement number 20), the perceived social status of the language being studied (statement number 21 upto 23), teacher's influence (statement number 24), school influence (statement number 25), and curriculum influence (statement number 26). To make this questionnaire easier to identify, the researcher grouped the questionnaire items order by its domain as seen in the following table:

Table 3.2 Components of Students' Attitudes

Components	Number of Items in Each Component	Total Number of Items
Cognitive	1,2,3,4,5,6	6
Affective	7,8,9,10,11,12	6
Conative	13,14,15,16,17,18	6
Social environment	19	1
Learners' experiences	20	1
The perceived social status of the language being studied	21,22,23	3
Teacher's influence	24	1
School influence	25	1
Curriculum influence	26	1
Total		26

Adopted from Baker (1992)

3.3.3 Reflective Journals

Journals used for reflection were the third method of gathering data. A journal can be used to record thoughts, feelings, and reflections as well as to discuss concepts. Students have been given the chance to express their thoughts, feelings, and reactions to writing exercises, experiences in the teaching program, and writing activities in general by keeping journals or writing diaries. Writing in a journal is essential to the growth of metacognition (Thamraksa, 1997).

The students specifically attempted to reflect in their journals on their understanding of themselves as writers and English language learners, as well as on writing assignments concentrating on analytical exposition texts and writing strategies such as self-evaluation, self-planning, and peer and self-monitoring. These reflective journals were made five times (week 2, week 5, week 8, week 12, and week 15). Appendix 17 contains a sample of the reflective journals.

3.3.4 Interviews

The fourth instrument in this research was interview. Interviewing is considered one of the most beneficial methods for examining people's opinions and beliefs in research based on data. Arskey and Knight (1999, pp. 2) argued that conducting interviews was an advantageous research technique as it enabled the researcher to examine "information regarding comprehension, viewpoints, past actions, feelings, and similar aspects." An interview is an oral question-and-answer session used as a data collection tool between the researcher and the respondents. It can be carried out in person or through any other kind of

communication, including phone calls, online chats, and mobile messaging. An interview is defined as "a conversation with a purpose" by Lincoln and Guba (1985), and Berg (1989). Boyce and Neale (2006:3) assert that it is a qualitative research method that entails questioning a small group of respondents in-depth during individual interviews to learn about their viewpoints on a given concept, initiative, or circumstance.

Interviews come in three primary forms. The first type is highly explicit and structured, with the interviewer (researcher) prepared with questions. In the second, which is low explicitness (unstructured), the researcher (interviewer) presents a topic for discussion and allows the subject a great deal of flexibility to speak without having any predetermined questions. In contrast, the third one incorporates elements of the first two: the interviewer is given a topic to discuss in addition to having questions prepared. Literature, however, offers a variety of forms that fall under these two categories.

In conducting the interview, two main question formats were used such as, closed and open-ended questions, which vary depending on the type of response that was intended (Ary et al., 2002). Respondents were asked to answer closed-ended questions according to the options given, while open-ended questions allowed them to react freely depending on their understanding. The students were free to respond to open-ended questions utilized in this study to collect data. The researcher conducted the interview parts in Bahasa Indonesia to help the interviewees feel more at ease and provide clear responses. Additionally, to facilitate respondent understanding and the accessible provision of answers to the questions, the researcher employed simple and creative language.

3.3.5 Documents

The last instrument used in this research was documents. The documents of this research were taken from printed and recorded materials by using metacognition awareness inventory strategies in students' analytical exposition writing processes at a private university in North Sumatera, Indonesia. The documentation data in this research included lesson plan, syllabus, and students' writing scores (pre-test and post-test). In addition, it was also found from the recording of the students' activities and from the interview with the students.

3.4 Data Collection Process

The researcher did an observation at a private university in North Sumatera before conducting the research. In accordance with university policy, the observation was conducted prior to the researcher beginning his teaching practice on Wednesdays and Fridays for one month. The researcher was required to complete an observation sheet based on Morrison's (1993) criteria to document the learning activity at that university (see Appendix 8), which served as a reflection tool to prepare the researcher for the teaching practice. It included how the researcher instructed and provided the students with the resources and how the students participated in the learning activity. The observation was carried out by the researcher individually. To aid in carrying out the research, the researcher further made a reflection following the observation of the learning activity.

The researcher employed a metacognitive awareness questionnaire and an English writing test to collect data from the students in this study. Students were required to create analytical exposition texts connected to their understanding of argumentative occurred in daily life for the English writing exam. In order to create a suitable test, the researcher also consulted with his lecturer and other teachers. The researcher should have known the learner's characteristics before administering the writing test. In addition, the researcher reviewed the materials that students were supposed to write for the test. The researcher assigned the students to choose one topic out of three topics given. Before beginning to write, each student was instructed to create a list or plan the researcher had already provided. After completing their plan, they would proceed to compose the analytical exposition texts, referring to their plan for direction.

To facilitate the assessment of the students' writing tests, the researcher developed writing test rubrics (see Appendix 4). The University of Cambridge ESOL Examinations created and employed writing assessment standards that evaluate content, accuracy, range, organization and cohesion, and target reader. In pairs, students completed the worksheets with the marking scheme for the writing paper from the University of Cambridge ESOL Examinations. This was the first time they dealt with peer assessment. The worksheets included samples of an article. In order to help students with their task of indicating where correction was

required, they were also handed a worksheet with a general marking code for the writing paper. The University of Cambridge ESOL Examinations marking scheme, which consisted of six bands and descriptors, was also given to the students on a separate worksheet. They wrote a comment for each assessment criteria and gave the example article they were given a band. Students replicated the earlier peer-assessment process using the article from their peers, followed by a draft of their own article to act as their own critic. After that, they completed the worksheets for peer and self-evaluation (Appendix 16). The purpose of this was to confirm whether correlations could be found between self- and peer ratings. In other words, the researcher wanted to demonstrate the validity and reliability of self-assessment of writing skills as a valid tool that demonstrated agreement between assessments made by peers, teachers, and oneself, as well as the consistency of results between first and final drafts of written assignments.

After reading the students' drafts, written comments were made. The students revised their work using the feedback as a guide. A marking code was used to indicate areas needing correction, and comments were made in the form of a letter regarding the assessment criteria previously developed and employed. A score ranging from 0 to 5 was assigned to every evaluation component. The goal was to respond as an engaged and genuine reader instead of a critic and judge. After considering the feedback from their teachers, peers, and themselves, students revised their analytical exposition texts.

Furthermore, to make the data for the metacognitive awareness inventory strategies questionnaire easier to analyze, it was converted into a numerical format. In order to avoid students misinterpreting the questionnaire's statements if they were written in English, the questionnaire was translated into Indonesian. Two response choices were available on the questionnaire: Completely True (Sangat Benar) or Not at all True (Sama sekali tidak benar). Based on those choices, the responses were converted to numbers. Each of the scores for each statement included a description of the statements.

The interview served as an additional tool to get student feedback and reinforce the conclusions drawn from the teacher's response regarding applying metacognitive strategies in writing assignments. The English teacher selected

them based on how well they wrote during the learning process. Additionally, they represented the top, middle, and lowest-scoring categories. Interviews with students took place outside of class or during a break. In order to complete the writing assignment, the participants had to react to questions about their research on metacognitive learning strategies. The responses would take the shape of viewpoints, dispositions, or emotions on the subject. The purpose of the interview with the respondents was to gather and validate their responses about the research on metacognitive awareness strategies to improve writing abilities in the writing task. Additionally, the most effective method for gathering interview data was for the researcher to record the respondents' responses using a recorder. Additionally, it serves as a precise record of the answers (Ary et al., 2002).

In conclusion, the table 3.3 summarizes the steps involved in the data gathering technique procedure as follows:

Table 3.3 The Process of Collecting Data based on Research Questions

Research Questions	Aspect	Source of Data	Research Instruments	Data Collection
What aspects of metacognitive knowledge are identified in Indonesian university students' writing?	The aspects of metacognitive knowledge identified in Indonesian university students' writing.	Students	Questionnaire on Metacognition Awareness Inventory (MAI)	Observation, Questionnaire, Reflective Journals
What aspects of metacognitive regulation are identified in Indonesian university students' writing?	The aspects of metacognitive regulation identified in Indonesian university students' writing.	Students	Questionnaire on Metacognition Awareness Inventory (MAI)	Observation, Questionnaire, Reflective Journals

Research Questions	Aspect	Source of Data	Research Instruments	Data Collection
What are the Indonesian university students' attitudes (in terms of cognitive, affective, and conative) toward English writing instruction and tasks?	The Indonesian university students' attitudes toward English writing instruction and tasks.	Students	Questionnaire on Attitudes toward analytical exposition writing	Questionnaire, Observation and Interviews

The identical method of data collection would be used to address the three research questions. The researcher required the students' responses to the questionnaires. After that, the researcher examined the questionnaire results, taking into account the categorization of metacognitive strategies and the students' attitudes toward the analytical exposition texts. The researcher then used the theory based on the literature review to interpret the results. Ultimately, the method of gathering data was completed using the investigation findings that addressed those three research issues.

3.5 Data Analysis

The purpose of this dissertation is to figure out the aspects of metacognitive knowledge and the aspects of metacognitive regulation identified in Indonesian university students' writing. Furthermore, it is to figure out the Indonesian university students' attitudes (in terms of cognitive, affective, and conative) toward English writing instruction and tasks.

Considering the application of mixed methods design in this research, which allows separate analysis for each quantitative and qualitative data before the final analysis, a number of data-gathering methods were employed, including observations, questionnaires, reflective journals, interviews, and documentations. Descriptive statistics were used to assess quantitative data about the questionnaires of students' metacognitive knowledge, metacognitive regulation, and students' attitudes components toward English writing instruction and tasks.

In particular, Gay et al. (2009) propose that the frequency of students' responses to the questionnaire items be counted since the questionnaires utilized are regarded as survey tools. Furthermore, in accordance with Boone and Boone (2012), the data are best analyzed in terms of variability, which yields frequencies, since the goal of the questionnaire administration is to see students' responses towards the questionnaire items, which represent the discrete component of metacognitive knowledge, self-regulation, and attitudes. After the data were analyzed, the frequency of the students' answers was converted into percentages by dividing the number of answers for each item on the questionnaires by the total number of students and then multiplying by 100. The following figure illustrates the calculating formula.

$$Percentage = \frac{frequency\ of\ responses}{number\ of\ students} \text{ X } 100\ \%$$

Figure 3.1 Formula of Students' Responses Percentage

Furthermore, to analyze the students' writing, the format used was a pre-experimental design that involved a group. In this design, a single group was measured or observed not only after being exposed to a treatment of some sort, but also before it by applying pre-test. No comparison with a control group was provided (Best & Kahn, 2006). The participants' abilities were pre-tested through an in-class writing task at the beginning of the class to confirm the students' writing abilities were in the same level. After that, the treatment was given by the researcher. Participants were post-tested after taking the treatment. The effects of various planning approaches on students' writing performance were then determined by comparing the differences in students' writing performance as indicated by their writing scores before and after the treatment period.

On the other hand, descriptive qualitative analyses were then carried out on the participants' responses posed in the questionnaires and on significant statements stated in the transcribed semi-structure interviews, classroom observation, reflective journals, and documents. Qualitative analyses were carried out by codifying units of meaning that entail establishing themes to find out the categories that serve the findings of this study. To ascertain the validity of the results, in-depth analyses on data set were not only done by one per-question but also across questions under the same theme as well as across themes.

The researcher used Creswell's (2012) recommended qualitative analysis procedure. The procedure is depicted in the following figure:
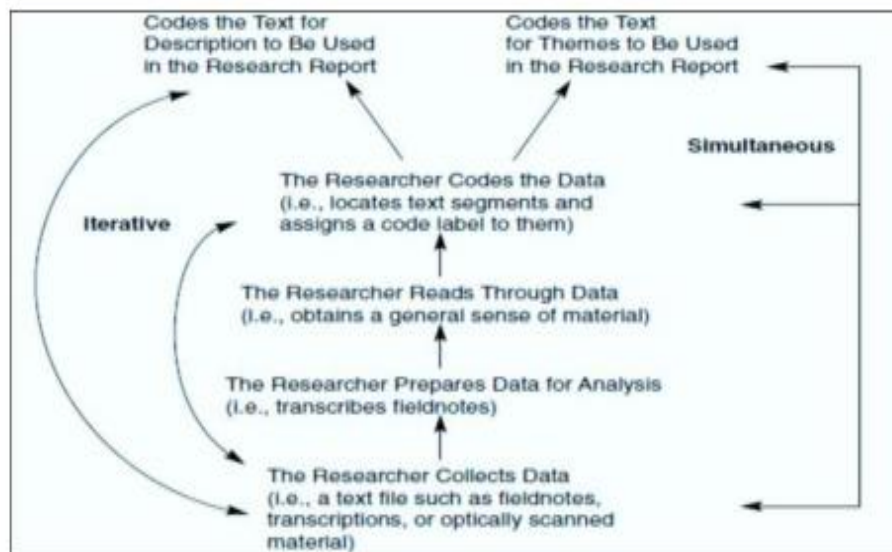

Figure 3.2 The Qualitative Content Analysis Scheme (Creswell, 2012, pp. 237)

The analysis method was depicted in the figure, comprising multiple steps. The research data was initially gathered by the researcher, who also collected questionnaire data, transcriptions from the students' writing activities, interviews, and observation notes from the students' writing texts. Those data were first prepared for analysis and then read to have a general idea of how the teaching program was implemented in terms of encouraging students' awareness in the context of EFL writing. The researcher coded the data in the next section to identify the text segments and give them a code name. Ultimately, those data were concurrently coded for themes in the research report and the description using an iterative coding process. Each data collection is explained in depth in the section below.

3.5.1 Observation

The information gathered from the classroom observation provided the researcher with a chance to gather particular situational data in order to comprehend the background of the application of metacognitive-based writing instruction on self-regulation. Cohen et al. (2002) state that classroom observation facilitates the researcher's ability to access personal information, go beyond

perception-based data, and comprehend the significance of objects that may be accidentally disregarded.

To understand the natural setting of the instruction in promoting students' self-awareness in the EFL writing class, the data from a classroom observation were qualitatively analyzed. This included a) individual student-teacher interactions in understanding writing tasks and affective knowledge and using metacognitive strategies in writing, b) students' responses during the implementation, and c) students' performance and behaviors.

Flick (2014) identified three methods for assessing observation data: construction analysis, inductive analysis, and descriptive analysis. These methods were based on the literature. Descriptive analysis pertains to defining the setting, giving the social meaning of field notes, discovering inferences from observation, and documenting instances where the environment of the setting provides empirical evidence in the form of pictures and patterns. The next step in the inductive process is to generalize the specific observations to represent actual, objective outcomes (grounded theory) in a logical and empirical manner; the observations are either theoretically coherent or not. Third, the construction analysis focuses on how participants create social experiences and contextualizes distinct, tangible processes based on a valuable description of the actual process.

The implementation of metacognitive strategies in a writing class was interpreted in a clear and comprehensive manner by this study using the three empirical methodologies to analyze the observation data. Here, the methods' analysis procedure was covered. The study first established the context of the instructional program, explained the social significance of the teacher's and students' statements made in the field, identified conclusions drawn from the data, and recorded the empirical evidence using images, text, and patterns. Subsequently, the study attempted to represent, both logically and empirically, the use of metacognitive instruction in fostering self-regulation in an EFL writing class at the research location. It examined whether or not the observation was theoretically coherent (e.g. assigning the students to examine and discuss the two analytical paragraphs to find the objectives, general frameworks, and the lexicons). Lastly, it provided a contextualized explanation of the distinct and

practical procedures based on a useful description of how to apply metacognitive training to encourage self-regulation in EFL writing classes. It also covered the way in which students create their social experiences within the classroom.

3.5.2 Questionnaires

In order to gather information about the students' understanding of themselves as English language learners and writers, writing assignments, and usage of learning strategies, questionnaires were given out after the program. The information on the subject (cognitive: perceived usefulness; affective factors: self-confidence, anxiety, and enjoyment; and conative: intrinsic motivation), the writing assignment (analytical exposition texts), and the learning strategies from metacognitive knowledge (declarative, procedural, and conditional knowledge) and metacognitive regulation (planning, monitoring, information management, debugging, and evaluation) would then be used to examine it. The results were then compared in order to assess how the students' skills had increased. The research data was analyzed using SPSS 24 for descriptive analysis, with a focus on percentages (See figure 3.1 above). The percentages of each component of attitudes, writing tasks involving analytical exposition texts, and metacognitive strategies as was mentioned earlier, were the main focus of this analysis, which used nominal data. The analysis findings of reliability, validity, and percentages are displayed in Appendix 9 upto Appendix 15.

3.5.3 Reflective Journals

A qualitative analysis of the data from the reflective journals was conducted. The reflections that the students wrote while participating in the classroom activity were contained in the journals. It is used to assess how well students develop their writing self-regulation, including their beliefs and how they plan, monitor, and assess their learning progress when metacognitive strategies are employed. The reflective journals of the students examined many facets of self-regulation, including writing assignments, affect awareness and regulation, and application of learning strategies. Attitudes, emotions, and self-efficacy were all implicated in aspects of knowledge and regulation. Subsequently, the last section included planning, monitoring, and assessment, and the knowledge and regulation of writing activities concentrated on analytical exposition texts. In

order to triangulate data from questionnaires given out before and after the teaching program, the students' reflective journals were reviewed.

3.5.4 Interviews

Throughout the interview's final results analysis, the researcher usually employed coding (Cohen et al., 2000). The findings of this investigation were analyzed qualitatively. The arrangement was more thoughtful and responsive. Additionally, the researcher may contextualize data from this study's understanding of social experiences. Four steps were included in the processes:

1. Deriving meaning from the natural units
2. Organizing, categorizing, and classifying meaning units
3. Structuring the narrative to clarify the interview's content
4. Interpreting the findings

The data were evaluated to look into the students' detailed reactions to the educational program in order to validate the questionnaire results.

3.5.5 Documents

Using The University of Cambridge ESOL Examinations analytic scoring rubric, the students' writing outcomes were determined by qualitatively analyzing their texts as evidence of learning, which included texts from the writing processes as well as the pre-test and post-test. Content, accuracy, range, organization and cohesion, and target reader are all included in this rubric. First of all, the structure and content of the texts go over the assignment task convention, the characteristics of the selected genre, the concepts or application of relevant information, the use of substantial concepts, and the audience's sense. The texts' message, the organization's growth through the thesis, arguments, and reiteration/conclusion, the supporting details, and the logical flow of information are then all included in the organization and coherence. Then, a wide range of sentence forms, lengths, transitions, agreement of tense, number, person, articles, pronouns, and prepositions, as well as the use of a wide range of lexical items, word forms, idiom choices, and register, are all included in the accuracy and range. Finally, the desired effect on the reader is achieved or not will be the discussed. Students must be able to perform at a level that is "acceptable" in accordance with the evaluation guidelines created by The University of

Cambridge ESOL Examinations Marking Scheme in order to succeed in writing. If a student receives a score in the "Good" (4) or "very good" (5) categories, their writing abilities are considered "acceptable." Even though the student's writing ability is only one point below the "good" level—that is, in the 3 category, or "sufficient"—it is nevertheless undesirable. The poorest categories are those with the lowest values, such as "bad" (2) and "very bad" (0-1). The various writing performance levels of the students had determined the type of assistance that was given to each of them.

3.6 Ethical Considerations

The primary information source for this study was individuals. In order to abide by the rules of ethics, the researcher covered the identities of people, places, and the research location using made-up names to protect the rights of human research participants, even though there is no administrative body established in Indonesia to protect the rights or welfare of those who were recruited to participate in this study. Additionally, the participants in this study were entirely voluntary.