

CHAPTER III

METHODOLOGY

3.1 Research design

The design of this study is a descriptive content analysis. It emphasizes the unique themes that exemplify an array of meanings from phenomenon rather than the statistical significance of the occurrence of particular texts or concepts (Hashemnezhad, 2015). It uses inductive analysis, means the themes and the categories come out of the data through the researcher's careful examination and constant comparison. It is a research instrument used to show the existence of certain words or concept within texts or sets of textbooks.

From those, the researcher uses descriptive content analysis because this study will describe the levels of Cognitive Taxonomy on the English summative test. Through the result of analysis, she describes on how the English summative test items are constructed based on Cognitive Taxonomy. This study will be held at grade eight of MTs N Gresik in which the English summative test consists of fifty questions of multiple-choice. The researcher will use a purposive sampling technique for choosing the subject.

Each test item on the English summative at grade eight will be classified according to the cognitive Revised Bloom's Taxonomy. In addition, the Revised Bloom Taxonomy consists of two dimensions: the cognitive process dimensions (remember, understand, apply, analyze, evaluate, create) with sub-categories and the knowledge dimension (factual, conceptual, procedural and meta-cognitive). The researcher only focuses on the cognitive process dimension because MTsN

Gresik uses the thirteen curriculums in which the cognitive aspect of Anderson taxonomy emphasizes only on the cognitive process dimension: remembering, understanding, applying, analyzing, evaluating and creating (the Ministry of Education and Culture regulation no. 22, 2016). The multiple choice test items will be described deeply from the real condition as like with the purpose of this study.

In this case, the researcher uses a coding scheme through document analysis, interview, and questionnaire as a technique. From those, all the data will be displayed, reduced, and concluded in the form of descriptive and pattern.

3.2 Source of Data

3.2.1 Subject

The subject of research can be someone, things, or other as the source of information, which is needed in gathering the data (Atika, 2013). The subject of this study is the English summative test in grade eight. It consists of fifty test items of multiple choice.

Furthermore, the technique for choosing the subject is purposive sampling. It is the way to select the subject by considering the characteristics. The considerations in selecting the subject is:

- 1) English summative test in grade eight is one of evaluation, which held at the end of lesson for repairing the educational quality before entering grade nine.
- 2) It is one way to know to what extent the students meet the English learning objectives before entering grade nine.
- 3) The consideration of the teacher and the vice of curriculum at MTsN Gresik.

- 4) The English summative test items at grade eight are designed by the teacher of MTsN Gresik.
- 5) The Summative test in the academic year 2016/2017 has not already made.

3.2.2 Setting

The researcher will take the data from MTsN Gresik. It is located on Jalan Raya Metatu No. 31 Benjeng, Gresik. The only one Madrasah Tsanawiyah has state status in Gresik. At that school, the English summative test is made by the teacher of MTsN Gresik. Besides, this school gets many achievements in academic or non-academic.

3.3 Data Collection Technique

3.3.1 Instrument

The instruments are important in collecting data in any scientific research. The accurateness uses of the instrument determine the result of research (Valkinz, 2013). Therefore, it should be well-prepared and has a powerful impact on the acceptance of research in public consumed.

The researcher needs to use the certain instrument for supporting the analysis of the data in order to reach the objective of the study. In this study, three instruments are used.

3.3.1.1 Document Analysis

The researcher will do a document analysis using coding scheme before the English teacher doing interview or filling the questionnaire. The researcher adapts the coding scheme from the previous researcher named Kazempourfard (2011) in Razmjoo & Madani (2013). It is designed based on the Bloom's Revised

Taxonomy. Moreover, it aims to classify, and analyze the English test items on the summative test.

The coding scheme consists of five aspects: level, generic skills, keywords, and sample questions. The researcher will explain each of aspects as the following. The first is about level, it consists of five levels: remember, understand, apply, analyze, evaluate, and create. The level ranges from the simple recall or recognition of facts, as Lower-Orders of Thinking (LOTS), through increasingly more complex and abstract levels or (Higher-Orders of Thinking (HOTS) of evaluation and creation. Each English summative test item will be categorized and labelled: A for Remembering level, B for Understanding level, C for Applying level, D for Analyzing level, E for Evaluating level, and F for Creating level.

The second is generic skill, it explains the meaning of each cognitive taxonomy level. This will help the researcher find the reason that the test item belongs to the level if there is no keyword(s) on the test item. Therefore, the researcher will interpret the meaning of test item then classify it.

The third is about keywords. It represents intellectual activity on each level. It means that there will be presented some verbs that represent every level. So, the researcher will check the verbs on the test item for classifying them.

The fourth is about the sample questions. There will be presented some sample questions starter on the sample questions column for helping the researcher classify.

Finally, the generic skills, keywords, and sample questions will help the researcher find the reason that the test item belongs to one of that level. If the

sample question, and keyword do not exist on the English summative test, the question will be classified from the generic skills. The meaning of each level will help the researcher classify it. The coding scheme can be seen in appendix 1.

3.3.1.2 Questionnaire

The researcher designs questionnaire based on the theory some experts. It is made in English and translates it in Indonesian. The aims to translate is to avoid misunderstanding with the audience. The questionnaire consists of 53 questions. The question number 1 and 53 will help the researcher answer the second research question while the question number 2 to 52 as the expert validation question. It aims to validate the result of document analysis that have done by the researcher.

First, the first question on the questionnaire is multiple choice. This question will answer the second research question that is “How does the teacher design the English summative test based on Cognitive Taxonomy at grade eight of MTsN Gresik in the academic year 2015/2016?”.

Second, the researcher makes two open-ended questions for number 2 and 53 on the questionnaire. For question number 2, the respondent will mention the consideration for designing the English summative test item. And number 53, the way to design it will be explained. So, both of the questions will answer the second research question.

Third, the researcher combines open-ended questions and multiple-choice (closed format) questions on one question. There are 50 items (questions number 3-52 on the questionnaire) from combination both of them. Those questions are for answering the first research question “how are the levels of Cognitive Taxonomy on English summative test at grade eight of MTsN Gresik in the

academic year 2015/2016?”. For open-ended questions, the English teacher has an opportunity to express his opinions freely whatever he feels right because it does not have predetermined set of responses. But, on multiple-choice questions, he should choose one of answer from the choices by circling it. The questionnaire can be seen in appendix 3.

Here, the content validity of the questionnaire:

Table 3.1 The Organization of Questionnaire

Indicators	Items	The amount of item
1. There are principals, procedures, and considerations in designing a test	All test items on English summative test at grade nine were made based on learning material on the syllabus and lesson plan a. Yes, it represents a syllabus and lesson plan b. Considerable part c. Little part	1 item (question number 1 on questionnaire)
	What are the considerations in creating English summative test at grade eight?	1 item (question number 2 on questionnaire)
	How to construct the English item test? (explain it in order)	1 item (question number 53 on questionnaire)
2. The cognitive process dimension of Revised Bloom’s Taxonomy consists of six levels. Those are remembering, understand, applying, analyzing, evaluating and creating.	The test item number..... belongs to a. Remembering level b. Understanding level c. Applying level d. Analyzing level e. Evaluating level f. Creating level	50 items (question number 3-52 on questionnaire)
3. In analyzing the each level of cognitive process need reasons such as: generic skills (meaning), keywords, and sample questions.	Reason/Keyword: _____ _____	

3.3.1.3 Interview

The researcher will do an interview with the English teacher who has constructed the English summative test for grade eight to get the information. It is about the experience in designing the English summative test and the level of cognitive aspect. Besides, the first question is made for clarifying the result of document analysis and questionnaire.

The researcher uses face-to-face interview to collect the data. Besides, there will be several questions that have been prepared by the researcher based on the coding scheme that is adapted from Kazempourfard (2011) in Razmjoo & Madani (2013), the level of cognitive process dimension by Anderson et al., (2001), and the procedures of designing test by Suharmanto (2012) and Tenjo (2012). The interview can be seen in the appendix 4.

Here, the content validity of interview:

Table 3.2 The Organization of Interview

Indicators	Items
1. The cognitive process dimension of Revised Bloom's Taxonomy consists of six levels. Those are remembering, understand, applying, analyzing, evaluating and creating.	1. How are the levels of English summative test based on Cognitive taxonomy? Mention the reason why the test item belongs to the level?
2. In analyzing the each level of cognitive process need reasons such as: generic skills (meaning), keywords, and sample questions.	
3. There are principals, procedures, and considerations in designing a test.	2. What are your considerations in designing the English summative test at grade eight? Please explain in detail! 3. Please explain in order the way to construct the English summative test item based on cognitive taxonomy?

3.3.2 Trustworthiness of the Study

Trustworthiness is the process of saturated data from the investigation. One of the processes to prove the data is through triangulation. It is used to find the accuracy of data; in this case, triangulation is one of the validity measurements.

The researcher will analyze the English summative test first. Then, the result will be validated by the English teacher of MTsN Gresik. First, the researcher explains the existence of cognitive level and also the reason. After that, the English teacher will give comment whether the result achieves the right analysis or not. The teacher will give the validation by filling the questionnaire number two to fifty-two and it also can be seen through the result of the interview.

The result from the instruments like coding scheme through document analysis, audio recording of interview and questionnaire will be compared. If the findings from the different English teachers arrive at the same conclusion, then the findings would be heightened.

3.3.3 Data Collection Procedure

In this study, the researcher collects the data by herself. This research will be conducted according to these systematic procedures:

1. The researcher asks a permission to MTsN Gresik to do research.
2. Arrange the schedule to meet the English teacher of grade eight
3. Collecting the English summative test paper of eight grades
4. The researcher codifies the English summative test at grade eight first.
5. Then, the respondent and the researcher will analyze together by codifying each item tests based on the coding scheme that is adopted from Kazempourfard (2011) before filling the questionnaire. This step aims to

validate the result of document analysis that the researcher did. After discussing it, the English teacher will fill in the questionnaire.

6. The researcher interviews the English teacher to clarify the result of a questionnaire
7. The last, the researcher analyzes the data and draws a conclusion.

3.4 Data Analysis

The researcher uses the procedures of data analysis as follows:

3.4.1 Data Display

Data display is the process for presenting the result of the research. In this step, the researcher will analyze and display the data by making transcription and narration. The first data display is the result of document analysis through coding scheme. The research will narrate the level of cognitive taxonomy on each test item at English summative test and explain each reason in the form of a table.

The table consists of two parts: question and keyword or reason.

The second data display is the result of an audio recording of interview. It will discuss both two of research questions: the level of cognitive taxonomy of English summative test and the way to construct it. The researcher replays the recording, then makes the transcription fully in the form of essays; it starts from the first to the end.

The third data display is the result of a questionnaire that is held before interviewing session. First, the research will read each result of questionnaire, then it will be transcribed in the form of an essay.

3.4.2 Data Reduction

The second data analysis is data reduction. The first data reduction is the result of document analysis through coding scheme. This data will be presented in the form of a table. The table will consist of category of cognitive taxonomy, keyword/ reason, and sample sentence starter. The test items of the English summative test will be not classified each item, but they will be grouped based on the level. For example, if the remembering level consists of some test item, they will be mentioned in one column. Then all the reason will be selected and simplified. Finally, the level of cognitive taxonomy will be mentioned and arranged from Lower order thinking skills and Higher order thinking skills.

The second data reduction is the result of an audio recording of interview. On it, there will be many kinds of data: the level of cognitive aspect on English the summative test and the way to design it. It will be rearranged, focused, summarized based on the focuses of this study. It means that the unnecessary data will be erased. At the end, the data will be separated: the level of cognitive aspects of the English summative test and the way to design it. So, there will be two data from audio recording of the interview, they are the level of cognitive taxonomy which exist on English summative test, and the way to construct the English summative test item based on Cognitive Taxonomy.

The third data reduction is the result questionnaire. This data will be rearranged, focused, summarized, and concluded. The researcher will delete any inappropriate data with the focuses of this study.

At the end, the data should be cross-checked. The result of document analysis through coding scheme, audio recording about the level of cognitive

taxonomy which exists on English summative test, and the questionnaire will be compared to raise the same conclusion. If the findings arrive at the same conclusion, then it would be heightened. The data will answer the research questions. Then, both data will be explained in the form of an essay and or table.

3.4.3 Data Conclusion

The last step is data conclusion. This aims to give clear visualization from analysis of cognitive aspects of the English summative test and the way to construct it at MTsN Gresik.

The researcher draws the conclusion from data reduction that has been processed. As the researcher has stated in data reduction before, the data were classified based on the research questions. But in the data conclusion, the researcher makes decisions about the meaning of each data based on the interpretation of the researcher. This conclusion gives a clear explanation about the level of cognitive taxonomy on English summative text and the way the teacher constructs it at MTsN Gresik. The conclusion will be drawn and included in the next chapter.