CHAPTER III

RESEARCH METHOD

This chapter presents some detailed steps used in conducting the research, they are: research design, data sources, research instruments, data collection, data analysis techniques, and research validation.

A.   Research Design

This research is categorized as content analysis because this research examines and analyzes textbooks as the main source of data. In accordance with the opinion of Ary et al (2010) content or document analysis is a research method applied to written or visual materials for the purpose of identifying specified characteristics of the material. The materials analyzed can be textbooks, newspapers, web pages, speeches, television programs, advertisements, musical compositions, or any of a host of other types of documents. The material chosen is the textbook because as a learning medium to achieve new learning experiences through instructional questions provided.

In addition, content analysis can help teachers plan activities to help students learn, Fraenkel, (2012). This is in accordance with 2013 curriculum standards which seek to facilitate students with HOTS learning. Krippendorp (2004: 18) as cited in Cohen, Manion & Corrison (2007) defines it as a research technique for making replicable and valid inferences from texts (or other meaningful matters) to the contexts of their use. So that it can facilitate researchers in analyzing instructional questions in text books accurately according

to Revised Bloom Taxonomy theory. The content studied includes instructional questions in each chapter and classified according to the level of cognitive domain Bloom Taxonomy.

B. Data Sources

Best & Kahn (2006) stated that not only is the authenticity of the document important, but the validity of its contents is crucial. However the research data uses high-validity content analysis is so informative and important to increase empirical knowledge. The superiority of content analysis is explained by Fraenkel (2012) that content analysis is a method that has wide applicability in educational research. This implies that the content of the analysis is indeed compatible with academic education-based research especially Indonesian curriculum which must facilitate students with HOTS. So content analysis is important to examine how many instructional questions in textbooks already refer to HOTS.

As for other opinions expressed by Cohen, Manion & Morrison (2007) that content analysis can be carried out with any written material, from documents to interview transcriptions, from media products to personal interviews. It is often used to analyze large quantities of text, facilitated by the systematic, rule-governed nature of content analysis, not least because this enables computer-assisted analysis to be undertaken. The data source was taken from students' textbook "English" for the second grade of senior high school by Mahrukh Bashir.

C. Research Instruments

A research instrument is a measurement tool used to obtain, measure, and analyze data from subjects around the research topic. In other words, research

instruments are designed tools that contribute to the collection of data for the objectives of analysis. This study the main instrument for data collection is the researcher herself. Researcher is the author who conducts research to find empirical data, make observations, conduct analysis and convey it to the public. It can be concluded that the researcher is the primary instrument. The researcher also used triangulation as the technique to collect and validate the data.

D. Data Collection

Researchers used documentation to collect data. According to Ary et al (2010), qualitative researchers may use written data or other artifacts in order to gain an understanding of the phenomenon under study. The analysis documents can be written or text-based artifacts such as textbooks, novels, journals, meeting reports, logs, announcements, policy statements, newspapers, transcripts, birth certificates, marriage records, budgets, letters, e-mail messages, speech of president, etc. or as for unwritten records such as photographs, audiotapes, videotapes, computer images, websites, musical performances, television political speeches, YouTube videos, virtual world settings, etc.

The first thing that researchers do to collect data was to come to school to ask permission to borrow the analyzed book. Furthermore, data were collected in two stages. In the first stage, the writer analyzed and examines each chapter in the textbook to collect questions of instructional activities. In the second stage, the writer categorized all instructional questions of the activities by using research tools based on the cognitive domain in Revised Bloom Taxonomy. There are 8 Chapters and 7 Enrichments in the English textbook for senior high school.

E. **Data Analysis Techniques**

After collecting the data, the researcher initiated to organize the data. To avoid some errors, the researcher should understand the data, and then, the data must be described and interpreted. Finally, the data were presented. It is also known with the three stages term; they are organizing and familiarizing, coding and reducing, interpreting and representing. The description is presented below:

1. **Organizing and Familiarizing**

In the first stage of analyzing techniques from qualitative data, the researcher organized the data and made the data more familiar so that it is easy to read. The steps taken are researchers organizing data based on each chapter. Starting from chapter 1 to chapter 8 then enrichment 1 to enrichment 7, become familiar with the document. Next enter the data into the 4 column table to be ready to be analyzed. This table lists all activities in serial order, activities, levels, and page numbers. In the second stage, the writer categorizes all instructional questions of the activities by using research tools based on the cognitive domain in Revised Bloom Taxonomy.

2. **Coding and Reducting**

This second stage is the core of qualitative research because researchers must identify data categories (Ary et al., 2010, p. 483). Coding is a general procedure for qualitative data analysis. Therefore, researchers decided to use coding as one of the processes for analyzing data. Furthermore, researchers must categorize instructional questions in each chapter and enrichments into the level of cognitive domain Revised Bloom Taxonomy. Coding categories

are labeled as follows: remembering, understanding, applying, analyzing, evaluating and creating. Then, the number of activities in the list for each category in the research tool is calculated, and the frequency of each level of activity that appears is also counted, then included in the table. Quantitative data analysis was used in this study. Furthermore, the authors use descriptive statistics such as percentage (%) and frequency (F) as basic data analysis techniques.

3. Interpreting and Representing

At this stage, the researcher focuses on interpreting and representing the results of this research and the findings of this study by linking the data with related theories, which use the Revised Bloom Taxonomy theory. In interpreting, researchers must explore the meaning and provide an explanation (Ary et al., 2010). In representing, the researcher provides how the data is presented clearly. Researchers also develop relationships, general aspects, rational and empirical explanations of data.

F.   Research Validation

In qualitative research, data can be categorized as good and correct data if the data is valid. To get validity of the data. One of them is by using triangulation, according to data classification according to Creswell (2009). Triangulation is different from sources of information by examining evidence from the sources and using it to build a coherent justification for themes. Triangulation can be interpreted as a way for researchers resulting in research that is not subjective. Researchers doing triangulate by evaluating from Prof. Emi Emilia, M.Ed., Ph.D.

as Head of the Center for Strategy and Language Diplomacy, the Agency for Language Development and Coaching (Kemendikbud). She is one of the authors of an English textbook used as data. And the second researcher validated by two teachers. The teachers are Drs. Mustain, M.Pd.I. as English teacher of MAN 2 Kediri, where he was the supervisor of development K13 lesson plan, he also often participated in several seminars and workshops related to HOTS and was one of the representatives of the MGMP Kediri teacher in making of HOTS questions. Then, Alfin Zalica Hilmi, S.Pd. as a postgraduate student at IAIN Kediri and English teacher of SMKN 1 Semen who has attended HOTS learning seminars in English class. Validation is intended to ensure that the coding results conducted by the researcher are correct.