

CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the method. It describes the step of the research. It describes research design, object of the study, instrument, data collection, and data analysis.

A. Research Design

The function of a research design is to ensure that the evidence obtained enable us to answer the initial question as unambiguously as possible.¹ A method is way to do research. In doing research, the researcher may be able to use kinds of method. There are various research designs including experiment, descriptive, correlative, comparative, error analysis and action research.

In this study, the researcher used content analysis. This present study tried to answer the research questions through quantitative approach. We examined one package of each English National Examination from 2013 until 2019. There were 350 multiple-choice items in which each examination contained 50 items. The items were analyzed quantitatively through content analysis based on the aspects of HOTS in Bloom's Taxonomy.

¹ David A. de Vaus, *Research Design as Social Research* (London: SAGE Publication Ltd, 2001), 9.

B. Object of the Study

The object of this research is test items of English national examination (UNKP) from nine academic years on junior high school.

C. The Data Source

There are two data sources in this study. Those two data sources are English National Examination Questions and Analysis Card. Those data sources are used for collecting and analyzing the data to find the result of the study.

There are two data sources in this study:

1. English National Examination Question

The main data sources of this study is the English national examination questions which is used for 9th grade of junior high school students. The researcher used the test items from 2013 – 2019.

2. Analysis Card

The second source is analysis card. The analysis card is used as a reference to decide what kind of cognitive domains contained in each question. The analysis card is created by combining and collecting the understanding about six levels of cognitive domain from the revised edition of Bloom's taxonomy, there are remember, understand, apply, analyze, evaluate, and create.

D. Research Instrument

The major instrument in conducting this study is the researcher herself. She developed a tool called categorical content analysis. Murray (2009, p. 51) uses the term “categorical content analysis” to refer to a method of data analysis that identifies categories by selecting utterances from a text, which are then classified and grouped together. Content analysis was used as the research tool in this study. Hsieh & Shannon (2005, p. 1278) define content analysis as “a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns”.

Along with this definition, Marier (2000) stated that content analysis is considered to be an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification.

From these definitions, it is obvious that qualitative content analysis emphasizes an integrated view of speech/texts and their specific contexts. Weber (1990) stated that qualitative content analysis goes beyond merely counting words or extracting objective content from texts to examine meanings, themes, and patterns that may be manifested or latent in a particular text. It allows researchers to understand social reality in a subjective but scientific manner.

Consequently, to achieve the study purpose, a content analysis card was used to collect, describe and analyze data regarding the availability of LOTS and HOTS in the English National Examination in Junior High School.

E. Data Collection

Collecting data method is the ways that can be used by researcher to collect data.² To gather all information needed, the researchers collected all suitable documents that are available. The documents collected in this research were the seven test packages of English National Examination for Junior High School in the 2013 - 2019 Academic year. This data was obtained for English Paper and Pencil based National Exam (UNKP) items from school. This document which is publicly available on the Internet. It can be accessed in www.m4th-lab.net.

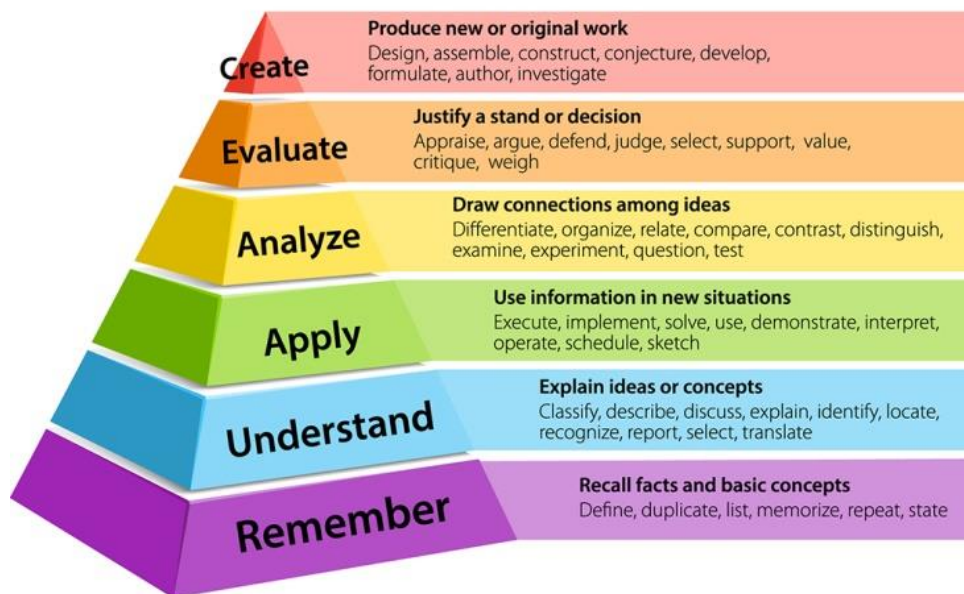
F. Data Analysis

The data analysis in this study was adapted from the study by Valdev Singh & Shaari (2019) which attempted to evaluate and identify specific aspect of HOTS in the National Examination. The study categorized the selected items into three parts. Firstly, evaluating the items based on the two major categories of Bloom's Taxonomy revised which are LOTS (remember, understand, and apply) and HOTS (analyze, evaluate, and create). Secondly, the items, then, are classified into the levels of HOTS which consist of the level of analysis,

² Suharsimi Arikunto, *Manajemen Penelitian* (Jakarta: PT. Rieneka Cipta, 2009), 100.

evaluation, and create. Thirdly, attempting to discover the subskills under each main skill; analysis, evaluation, and create. After all is done, we tried to compare all of English National Examination from 2013 to 2019 so that we would have a clear picture of the improvement of the use of HOTS-based items. To classify the types of thinking skill, the researcher uses some criteria identified in Bloom's taxonomy that can be simplified as follows³ :

Bloom's Taxonomy



G. Triangulation

The validity of the data in this study use triangulation techniques.

According to Fathor Rasyid, triangulation is technique of checking the data validity collected by the reseaecher.⁴ According to D. Ary, Lucy Jacobs, and

³Benjamin S. Bloom. *Taxonomy of Educational Objectives. Handbook 1 : Cognitive Domain* yang diterbitkan oleh McKey New York.1956

⁴ Fathor Rasyid, *Metodologi Penelitian Sosial Teori dan Praktik* (Kediri: STAIN Kediri Press, 2015), 287.

C.K. Sorensen, in data triangulation, the researcher investigates whether the data collected with one procedure or instrument confirm data collected using different procedures or instruments. The researcher wants to find support for the observation and conclusion in more than one data sources.⁵ This triangulation can avoid the bias of the researcher that might appear one time.

Sutopo (2002: 7-8), triangulation is the most common way to increase validity in qualitative research. There are four types of triangulation techniques, (1) data triangulation, (2) methodological triangulation, (3) investigator triangulation, (4) theoretical triangulation.

1. Data triangulation

In data triangulation, the researcher uses many sources or participants to get the accuracy of data. It means that the researcher comparing and cross-checking consistency of information derived at different times and by different means within qualitative method.

2. Methodological triangulation

Methodological triangulation refers to researcher uses more than one method in the research. Cohen (2000: 113) explained “Methodological triangulation is using the same method on different occasions or different methods on the same object of study”. Thus, methodological triangulation is making different method to get validity of data.

3. Investigator triangulation

⁵ Donald Ary; Lucy Cheser Jacobs; Chris Sorensen, *Introduction to Research in Education* (Canada: Wadsworth Cengage Learning, 2010), 499.

Investigator triangulation means technique that uses more than one researcher in collecting and analyzing data. From some researcher's view in interpreting information and collecting the data, the validity of data can be increased. In other words, if several investigators agree to their reporting of the context, it will be more valid and certifiable.

4. Theoretical triangulation

Theoretical triangulation means the researcher compares the data finding with perspective theory that is relevant. Here, the researcher is demanded to have expert judgment to compare the finding of research with the certain theory.

From those types of triangulations, the researcher uses investigator triangulation to get validity of data. It is more appropriate to be used to investigate the analysis that needs more investigators to measure the analysis' quality. So, the researcher invited one person, an English teacher who works in SMPN 1 Trowulan Mojokerto and an expert in HOTS Questions. His name is Romli, M.Pd. The researcher and the investigator observed the kinds of English National Examination Questions from 2013-2019 academic year. Then, the researcher compared the reports, discussed together, and delivered the points to result in complete result.