

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter review of theoretical framework which ideally discusses the higher order thinking skill, curriculum, and English national examination.

A. Review of the Previous Studies

The previous researches which related with this research are:

The first research conducted by Nur Pratiwi (1110014000017), Tarbiyah and Teachers' Training Faculty, Syarif Hidayatullsh State Islamic University Jakarta, 2014. The title is "Higher Order Thinking Skill in Reading Exercise (An analysis of reading exercise in pathway to English textbook for the eleventh grade of senior high school students)". The researcher identifies specified characteristics of the material in the textbook. This study used content analysis. The result showed that the distribution of the higher order thinking skill in the essay reading questions in the Pathway to English textbook is unequal, it means that it doesn't treat the higher order thinking skill properly, particularly the create skill which doesn't exist in the essay reading questions, it only gives more emphasis on the analyze skill by obtaining the highest number among the three skills in the higher order thinking level. The similarity between her research and the writer's, in analyzing the reading exercise with curriculum, and the differences are in the object of analysis.

The second research conducted by Hana Dyah Merina (041214086), Faculty of Teachers Training and Education, Sanata Dharma University Yogyakarta, 2019. Entitled “Analyzing the Multiple Choice Items of the Reading Test in Senior High School National Examination”. This study used qualitative approach, the data were collected from the researcher and interview. This research focus on the reading test of English national examination, the items were listed and classified based on the English reading objectives stated in KTSP. The similarity between her research and the writer’s, in analyzing the multiple-choice items in English national examination, and the differences are in the object of analysis and curriculum.

The third research conducted by Faradina ‘Ilma (133411037), Education and Teacher Training Faculty, Walisongo State Islamic University Semarang, 2018. Entitled “Higher Order Thinking Skills Questions in Reading Exercise”. This research focus on analyzing the reading exercise in Bright Course Book for the seventh grade of junior high school. This research used content analysis method. The objective of this research is to get empirical evidence of the distribution of the higher order thinking skill based on the revised edition of Bloom’s Taxonomy in the question of reading exercises and analysis of reading exercises in “BRIGHT” in term of type of reading exercises, aim of exercises, presence of examples and relevancy with 2013 curriculum. The similarity between her research and the writer’s, in analyzing the higher order thinking skill and the level school, and the differences are in the object of analysis.

The fourth research conducted by Randip Kaur Valdev Singh and Azianura Hani Shaari, Faculty of Social Sciences and Humanities, Universiti Kebangsaan Malaysia, 2019. Entitled “The analysis of Higher-Order Thinking skills in English reading comprehension tests in Malaysia”. This research focus to identify the use of HOTS items in selected English reading comprehension examinations for Standard 6 students in Malaysia. This research used content analysis method. The aims to enhance students’ cognitive skills and abilities in learning. Having a higher-order thinking ability at the earliest stage of formal education (primary and elementary levels) is essential in order to meet the growing demand for highly intelligent and professional workers in the future. The similarity between her research and the writer’s, in analyzing the higher order thinking skill and the differences are in the object of analysis.

The fifth research conducted by Ummu Lathifah Ahmad, East Java Provincial Education Department. Entitled “Senior High School English National Examination and Thinking Skills”. The purpose of this study was to analyze which levels of the Barrett taxonomy were more reflected in ENE items of 2013/2014 academic year and whether the proportions of items among the twenty test packages in the ENE assessing students’ Lower Order Thinking Skills (LOTS) and Higher Order Thinking Skills (HOTS) are consistent. The researcher adopted the qualitative descriptive approach using a content analysis card to codify the ENE items. To ensure the reliability of the study, three inter-raters analyzed a sample of the test packages. The similarity between her

research and the writer's, in analyzing the higher order thinking skill questions and the different is the level of school.

The sixth research conducted by Paige D. Sydoruk, Seton Hall University, 2018. Entitled "An Analysis of the Higher Order Thinking Requirements of a Grade 8 Online-Based English Language Arts Skills Program". The purpose of this study was to encourage problem solving, critical thinking, reasoning, and real-world application in order to prepare students for the workplace and are expected to be embedded consistently in classroom practice and learning. With the promotion of Standard 9 in New Jersey schools, technology has become a paramount tool because of its multitude of capabilities. This study serves as an examination of online-based programs that market the development of higher order thinking skills, raising a need for critique of these programs from school administrators and stakeholders before the purchase and implementation of such programs. There is a need for school personnel to examine these programs in order to decide on one that best meets students' needs and the intended goal of how the program would be used. The similarity between his research and the writer's, in analyzing the higher order thinking and the differences are in the level of school and the program.

The seventh research conducted by Merta Dhewa Kusuma, Undang Rosidin, Abdurrahman, and Agus Suyatna, Lampung University, 2017. Entitled "The Development of Higher Order Thinking Skill (Hots) Instrument Assessment in Physics Study". The purpose of this research are to determine the indicators and the effectiveness of the HOTS assessment instrument as

assessment for learning for a high school student. The problem in school is the questions used in cognitive instrument assessment which tend to test more on the memory aspect, meanwhile the questions that train student's higher order thinking skill are not quite available. The similarity between their research and the writer's, in analyzing the higher order thinking and the differences are in the focus of analysis and the program.

B. Higher Order Thinking Skill (HOTS)

a. The Understanding of Higher Order Thinking Skill

Higher order thinking skill consists of the three top ends of Bloom's taxonomy, analyze, evaluate, and create. Furthermore, the higher order thinking skill is related with the scientific approaches in the 2013 curriculum; observing, questioning, associating, experimenting, and communicating, because those approaches are also related with the problem solving and critical thinking skill which belong to the higher order thinking skill.

Brookhart claims that there are three categories about definition of high order thinking, (1) those that define higher-order thinking in terms of transfer, (2) those that define it in terms of critical thinking, and (3) those that define it in terms of problem solving.¹

¹ Susan M. Brookhart, *How to Assess Higher-Order Thinking Skills In Your Classroom* (Alexandria: ASCD, 2010), 3.

The categories which considered as HOTS are analyze, evaluate, and create. Each category is broken down into sub-categories with their particular characteristics. Analyze consists of three sub-categories differentiating, organizing and attributing. A test item is grouped in differentiating when it gives students with tasks to separate relevant from irrelevant parts of presented material. Organizing is the activity of thinking process when students work with an errand which requests that they incorporate components that fit or capacity inside a structure.

A test item is grouped in attributing when it asks students to establish a point of view, bias, principles, or meaning underlying presented material. Actually, attributing covers the author's view or principle from the text presented.

Nonetheless, in this research, the simplification is necessary to make so as to modify with the presented material. The following category is assessing with two sub-classifications, checking and critiquing. The first is identifying with the thinking activity that includes recognizing the effectiveness of a procedure being implemented and testing the inconsistencies of fallacies inside a process or product. In the other hand, critiquing includes the activity of identifying the external criteria of inconsistencies or inappropriateness of a given procedure. In other word, checking is judging an object or a procedure based on internal criteria. Sub-classification critiquing is making a decision about dependent on external

criteria. In this way a test item which provides task with those characteristics is categorized evaluate.

The last category is creating with three sub-categories: generating, planning, and producing. A test items was grouped in generating when it provided students with task to build alternative assumption based on certain criteria. The next, planning is activity relating to designing procedure to complete particular task. The last sub-category is producing that involves an activity of inventing a product.

In conclusion, the higher order thinking skill is the ability to think in the complex process which useful for transferring the knowledge in real life, thinking critically, and solving the problems. The students who already have the higher order thinking skills should be able to examine assumptions and values, evaluate evidence, and present the conclusions with their own words. It is also very crucial in today's world.

b. Higher Order Thinking Skill in Bloom's Taxonomy

There are some taxonomies from many experts in the educational field. One of the most acclaimed one is Bloom's taxonomy. Bloom's taxonomy explains the perspective. In Bloom's taxonomy itself, there are three domains of objectives that are useful for assessing students' behavior in the teaching and learning process. Those three domains are cognitive, affective, and psychomotor.

In addition, Bloom asserts that, “It is the domain in which most of the work in curriculum development has taken place...”² Hence, this study focuses only on the cognitive process of Bloom’s taxonomy. The following table is the table to explain the types of cognitive processes identified in Bloom’s taxonomy.

Table 2.1

The Types of Cognitive Processes Identified in Bloom’s Taxonomy³

Taxonomy Level	Related Verbs	General Description
1. Knowledge	Identify, remember, recall, recognize	Memorizing facts
2. Comprehension	Translate, restate, explain, describe, interpret, rephrase	Explaining in one’s words
3. Application	Apply, implement, execute, solve	Solving new problem
4. Analysis	Compare, categorize, distinguish, break down	Breaking into parts and identifying relationship

² Bloom, Benjamin S, *Taxonomy of Educational Objectives* (Ann Arbor: David McKay Company Inc, 1956), 7.

³ Airasian and Russell, op.cit., 2008, 68.

5. Synthesis	Combine, organize, integrate, relate, construct, design	Combining elements into a whole
6. Evaluation	Assess, judge, value, appraise	Judging quality or worth

Actually, the cognitive process measurement looks particularly like with the original Bloom's taxonomy except the order of the last two categories which is reversed or slightly rearranged. The last two order are reversed from synthesis and evaluation into evaluate and create. The meaning is the same but the order is slightly rearranged. The distinctions of the original taxonomy and the revised taxonomy can be seen as:

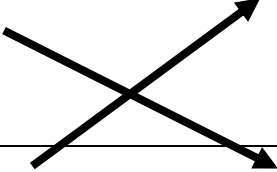
Table 2.2

The differences between Original Taxonomy and Revised Taxonomy⁴

Original Taxonomy	Revised Taxonomy
Knowledge	Remember - retrieve relevant knowledge from long-term memory (recognize, recall)
Comprehension	Understand – determine the meaning of instructional message

⁴ Diann Musial et.al, *Foundations of Meaningful Educational Assessment* (New York: McGraw Hill, 2009), 87.

	(interpret, classify, summarize, infer, compare)
Application	Apply – use a procedure in a given situation (execute, implement)
Analysis	Analyze – break material into parts and see how they related (differentiate, organize, attribute)
Synthesis	Evaluate – make judgements based on criteria and standards (check, critique)
Evaluation	Create – put elements together to form coherent whole or make an original product (generate, produce)



The table above shows that the meaning of each domain are the same between the original taxonomy and the revised taxonomy. The differences are only shown in the word-used and the rearrangement of the last two domains; synthesis and evaluation which into evaluate and create. Those two skills are rearranged because it is considered that the students

need to be able to critique and check an idea before they produce and generate some result.⁵

The rest level of taxonomies that ask the students to carry out thinking and reasoning process more complex than memorization are included in the higher order thinking level of cognitive domains in Bloom's taxonomy. The higher order thinking skill in the revised Bloom's taxonomy looks like:

1. Analyze level means breaking apart the information into the smaller ideas and determining the relation of those ideas.
2. Evaluate level includes checking and critiquing the value of material based on criteria.
3. Create level involves generating, planning, and producing the new structure from the disparate elements.⁶

In this way, cognitive domain is familiar with the teachers' knowledge since it is the most regularly instructed and evaluated for achieving the educational objectives. The higher order thinking skill in Bloom's Taxonomy looks like analyze, evaluate, create and those all need students' critical thinking.

C. Curriculum

⁵Tomi Kartika Putra, and Debbiga Fikky Abdullah, "High Order Thinking Skills (HOTS) Questions in English National Examination in Indonesia", *Jurnal Bahasa Lingua Scientia*. Vol. 11 No. 1 (2019), 145-160.

⁶Susan M. Brookhart, *How to Assess Higher-Order Thinking Skills In Your Classroom* (Alexandria: ASDC, 2010), 41.

Curriculum is used as the guidance of the implementation of learning activities to develop a learning system. 2013 curriculum follows learning which teachers do (taught curriculum) in the form of process which is developed in the form of learning activities in school, class, and society. And students' direct learning experiences fit to background, characteristic, and students' initial capability. Direct learning experiences of individual student become the result for themselves, while students' learning outcomes become the curriculum outcomes.⁷

2013 curriculum is designed by the following characteristics⁸:

1. Developing the balances between spiritual and social developed attitude, curiosity, creativity, cooperation with intellectual skill and psychomotor.
2. School is part of society which gives planned learning experience where students apply what they learn in school into society and make it useful as learning sources.
3. Developing attitude, knowledge, and skill also applying it in any situations in school and society.
4. Giving free time to develop attitudes, knowledge, and skills.
5. Competence is expressed in the form of core competence which is detailed more in subject basic competence.

⁷ Permendikbud Nomor 70 Tahun 2013, Tentang Kerangka Dasar dan Kurikulum 2013.

⁸ Ibid.

6. Class core competences become organizing elements basic competence, where all basic competences and learning process are developed to achieve core competences.
7. Basic competences are developed based on the accumulative principle, mutually reinforce and enrich inter subjects and education level.

2013 curriculum aims to prepare Indonesian people to have life skill as individual and citizen who have believe, productive, creative, innovative, and affective, and can contribute in society life, state and nation, and world civilization.⁹

2013 curriculum uses two components of competences; they are core competence and basic competence. Core competences are description about principal competence which is grouped attitude, knowledge, and psychomotor aspects that must be learned by students in every school level, class, and subject. Basic competences are content or competence which consists of attitude, knowledge, and skill which are sourced by core competence that must be mastered by students.

English is one of significant subject in every school. So, when the government changed the curriculum, they still give the priority in English subject. In junior high school levels, English will not be deleted. Indonesia's government gives portion to English subject four hours in a week for Junior High school in each level.

⁹ Ibid.

D. English National Examination

National Examination is a standard evaluation system of primary and secondary education in [Indonesia](#) and the equation of quality of education levels among the areas that are conducted by the Center for Educational Assessment of the [Ministry of Education and Culture](#). National Examination is as a standard educational assessment of primary and secondary education in Indonesia which is administered by the BNSP and has been administered by Sukyadi for its students since 2005 (Government Regulation number 19 of 2005). The test must be done by sixth, ninth, and twelfth graders at the end of junior and senior high school (grade 9 and 12) as the minimum graduation requirement (UNESCO, 2010). In addition, the purposes of the National Examination (NE) is to measure and to evaluate the Indonesian students' competences after the process of teaching and learning at the end of each educational level (i.e. grade six, nine, and twelve).¹⁰

The implementation of National Examination (NE) itself in Indonesia is considered as high – stake testing that lead to phenomena indicated as washback effect, mainly because of its result was utilized as a basic to make decisions concern with the students' graduation at high school.¹¹

Therefore, it has appeared positive and negative washback effect which have created pros and cons related to National Examination. Since,

¹⁰Sukyadi, D., & Mardiani, R. "The washback effect of the English national examination (ENE) on English teachers' classroom teaching and students' learning", *K@ta*, Vol. 13 No.1, 96-111. DOI:10.9744/kata.13.1.96-111. 2011

¹¹Ali Saukah , & Agus Cahyono Eko, "National Exam in Indonesia and its implications to the teaching and learning of English", *Jurnal Penelitian dan Evaluasi Pendidikan Universitas Negeri Malang*, Vol. 19 No 2 (2015), 243-255.

the implementation of National Examination in 2005 till final national examination continued to change. The national examination has been the subject of controversy since it was first established and has a lot of negative backwash in contrary with the main goals of increasing education quality in Indonesia. It became notorious for answer key leakage, cheating, fraud, and corruption. Some argue that the exam is too demanding for students. Schools were forced to allocate more time for preparing the students, putting a significant workload on both teachers and students. English National Examination in Indonesia is nationally administered to measure student's English Competence.¹²

In this study, National Examination is defined as an evaluation for English subject, reading skills particularly, by using multiple-choice format items which is conducted nationally at the end of school years.

¹²Umi Lathifah Ahmad, "Thinking Skills Questions in English National Exam For Senior High School in The 2013-2014 Academic Year", (Thesis. English Education Departement Graduate School Mandala Catholic University, Surabaya, 2015).