



**HIGHER ORDER THINKING SKILLS (HOTS)  
REALIZATION IN READING COMPREHENSION  
QUESTIONS FOUND IN ENGLISH TEXTBOOKS**

a final project

submitted in partial fulfillment of the requirements for the degree of *Sarjana*

*Pendidikan* in English Education

by

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## APPROVAL

This final project entitled “Higher Order Thinking Skills (HOTS) realization in reading comprehension questions found in English textbooks” has been approved by a board of examiners and officially verified by the Dean of the Faculty of Languages and Arts on 12 October 2020.

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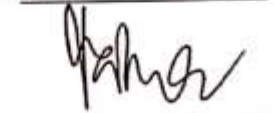
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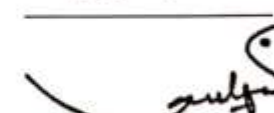
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## **DECLARATION OF ORIGINALITY**

I am Ervina Juli Aryani, hereby declare that this final project entitled HIGHER ORDER THINKING SKILLS (HOTS) REALIZATION IN READING COMPREHENSION QUESTIONS FOUND IN ENGLISH TEXTBOOKS is my own work and has never been submitted in any forms for another degrees or diploma in any universities or other institutions of tertiary education. Information from published or unpublished work of others has been acknowledged in the text and a list of references.

Semarang, 30 September 2020



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## MOTTO AND DEDICATION

*“Whenever you read a good book, somewhere in the world a door opens to  
allow in a more light” (Vera Nazarian)*

*“Reading is an act of civilization; it is one of the greatest acts of civilization  
because it takes the free raw material of the mind and builds castles of  
possibilities” (Ben Okri)*

This final project is dedicated to:

1. My beloved parents
2. All of my teachers and my lecturers
3. My dearest sisters
4. My beloved family
5. My lovely friends
6. My future

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## ABSTRACT

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**Key words:** critical thinking, higher order thinking skills (HOTS); English textbooks; reading comprehension questions

The creation of 2013 curriculum expects the integration of higher thinking skills to encourage students to achieve the competencies of critical thinking, creativity and innovation, communication, collaboration, and confidence. This is so since HOTS encompass the skills of critical thinking, creative thinking, problem solving, and decision making. As a result, textbook, which is an essential learning platform, should facilitate higher thinking skills. In learning English, it is expected that HOTS are developed in all the language skills, especially reading skill since it is quite essential which equally needs more attention. Accordingly, reading comprehension questions should impose higher thinking skills to enhance the development of HOTS in reading skill. Therefore, this present research mainly focuses on investigating the realization of HOTS in the reading comprehension questions found in three English textbooks for different level of grades which are published by the Ministry of Education and Culture.

This present research is a content analysis employing descriptive qualitative approach. Cognitive level of Bloom's revised taxonomy (2001) and task types of Numrich's sequence (Beaumont, 2010) are employed to analyze the data. There are 170 reading comprehension questions in the textbook for grade X, 42 reading comprehension questions in the textbook for grade XI, and 117 reading comprehension questions in the textbook for grade XII which are under analysis. Documentation technique is employed to collect the data.

The analysis out of three textbooks, two textbooks i.e. textbooks for grade X and XII highlighted LOTS. HOTS are less emphasized than LOTS. This can be seen from the analysis results which shows that the most emphasized skill belongs to lower thinking skills. In contrast, in the textbook for grade XI, HOTS are adequately realized. The reading comprehension questions primarily lead students to employ higher degree of thinking skills to accomplish the questions. These indicate that the reading comprehension questions are categorized into LOTS, and HOTS-based reading comprehension questions in the analyzed textbooks are properly represented only in the textbook for grade XI. In comparison to 2013 standards in realizing HOTS, these results seem to be less compatible with the standards. Therefore, with the abundance of LOTS-based questions, HOTS-based questions should be increased to foster the development of higher thinking skills.

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# **CHAPTER I**

## **INTRODUCTION**

This chapter presents the introduction of the study which comprises background of study, reasons for choosing the topic, research questions, objectives of the study, significance of the study, definition of key terms, scope of the study, and outline of the report.

### **1.1 Background of Study**

Education plays an important role in improving quality of life. It provides knowledge, skills, and also experiences which enable people to gain success and prosperity. Idris et al. (2012) mentioned that education brings huge impact in creating economic wealth, social prosperity, and political stability. With the massive impacts that the education offers, it is undeniable that education is expected to support the government's effort in preparing young generations to face the recent development.

In preparing young generation in this century, education requires students to master several skills that are formulated under the name 21<sup>st</sup> century skills which cover the skills of critical thinking and problem solving, creativity and innovation, collaboration, question formulation, global awareness, communication skills, and technology skills (Harvard Advanced Leadership Initiative, 2014). The skills are widely acknowledged as the provision to deal with the current global challenges. Thus, it is no wonder that the 21<sup>st</sup> century skills are included in many educational policies.

The inclusion of 21<sup>st</sup> century skills in educational settings can be seen in Indonesia through the adjustment of 2013 curriculum or known as K13. The Indonesian National Ministry of Education and Culture emphasized 21<sup>st</sup> century skills in the classroom context in the current curriculum (Ahmad, 2014). In implementing 21<sup>st</sup> century skills, critical thinking becomes one of the skills in which the Indonesian government has set standards-based curriculum (Syarifah et al. 2019). In order to enhance the development of the skill, a learning component such as assessment that includes HOTS are highly encouraged to be designed (Peter, 2013 in Widana et al. 2018). HOTS are aimed to be taught since HOTS are closely related to critical thinking (Lewis & Smith, 1993). The integration of HOTS in the teaching-learning components could enhance the development of critical thinking (Widana et al. 2018) since HOTS cover the skills which are needed in the critical thinking skill (Widana et al. 2018; Brookhart, 2010). This impliedly means that HOTS is the encompassing terms that can be the way to achieve variety thinking processes including critical thinking process (Lewis & Smith, 1993).

Noting the significance of HOTS, they are expected to be inserted in the educational elements, such as textbook which becomes an essential source of learning activity (Atiullah et al. 2019). In language learning, textbook serves as the source of language input for language learners (Richards, 2001). In connection to that, in the context of learning English, textbooks should ideally facilitate students with materials and exercises comprising HOTS, specifically in teaching reading due to the fact that in reading “the goal is not verbatim translation, but direct comprehension without recourse to the native language” (Harrys & Valette, 2013,



p. 165). This shows that in reading skill, students rely much on the ability to understand and furtherly be critical of what they read (Taylor, 2018). Therefore, in order to achieve the main purpose of reading and fulfill the mandate of the curriculum to master HOTS, it is urgent to realize HOTS in teaching reading, specifically in reading comprehension questions in English textbook. This is so since reading comprehension questions could guide students to comprehend text and assist the development of cognitive skills (Muayanah, 2014).

However, the availability of assessment that aims to train HOTS is still lacking (Pratama & Retnawati, 2018). This is proven by the result of my preliminary study investigating HOTS in English supplementary materials which are designed by English teachers. It was found that the exercises overemphasized the lower categories of thinking skills. Furthermore, the reading comprehension questions also highlighted the lower categories of thinking skills. This means that HOTS exposure is minimally presented.

This condition is worsen by the result of PISA test 2018. The test revealed that Indonesian students scored lower than the average score of OECD in reading proficiency (OECD, 2019). This proves that the Indonesian students' reading proficiency is in need of improvement. Amid these conditions, what needs to be developed is a qualified textbook providing sample of reading comprehension questions to promote HOTS in reading skill.

In order to ensure that HOTS are realized in reading comprehension questions in the textbook, analysis is the only way that can be employed. Therefore, this present research mainly conducts an analysis on the realization of HOTS in

reading comprehension questions in English textbooks published by the Ministry of Education and Culture. Since the textbooks are published by the Ministry of Education and Culture, it is obvious that the textbooks are widely used by the schools in Indonesia. That is why the textbooks are chosen to be observed in this present research. The exploration of the realization of HOTS uses the framework of cognitive level of Blooms revised taxonomy (2001) and task types of Numrich's sequence (2001).

## **1.2 Reasons of Choosing the Topic**

This topic was chosen by the researcher with two reasons:

- a. Knowing the fact that textbook has an essential role in learning activity, it is necessary to know and ensure whether or not the content already met the standards and the criteria of the curriculum, especially in promoting HOTS and critical thinking. Thus, it is necessary to analyze whether or not the content, specifically the reading comprehension questions promote higher order thinking skills.
- b. Higher Order Thinking Skills (HOTS) is nowadays emphasized in the 2013 curriculum as the efforts of strengthening the instillation of 21<sup>st</sup> century skills for students. Its implementation is highlighted by the Indonesian current curriculum. Hence, it is important to make sure the implementation.

### **1.3 Research questions**

- a. How are HOTS realized in reading comprehension questions found in the textbook for the tenth grade?
- b. How are HOTS realized in the reading comprehension questions found in the textbook for the eleventh grade?
- c. How are HOTS realized in the reading comprehension questions found in the textbook for the twelfth grade?
- d. How are the realization of HOTS in reading comprehension questions in the textbooks for grade X, XI, and XII viewed from task types of Numrich's sequence (Beaumont, 2010)?
- e. How are the realization of HOTS in reading comprehension questions in the textbooks for grade X, XI, and XII in accordance with 2013 curriculum?

### **1.4 Objectives of the study**

- a. To explain the realization of HOTS in the reading comprehension questions found in the textbook for tenth grade
- b. To explain the realization of HOTS in the reading comprehension questions found in the textbook for eleventh grade
- c. To explain the realization of HOTS in the reading comprehension questions found in the textbook for twelfth grade
- d. To explain the realization of HOTS in reading comprehension questions in the textbooks for grade X, XI, and XII viewed from task types of Numrich's sequence (Beaumont, 2010)

- e. To explain HOTS realization in reading comprehension questions in the textbooks for grade ten, eleven, and twelve in accordance with the 2013 curriculum.

### **1.5 Significance of the study**

The result of this present research is expected to share theoretical, practical, and pedagogical contribution.

Theoretically, the result of this present study provides new insights and knowledge on the current discussion pertaining to the implementation of HOTS. In addition, the result also presents the realization of HOTS in detail that can be a bases for the present knowledge and also future researches in engaging with the issue.

Practically, this study unveiled the information regarding how HOTS are realized in the reading comprehension questions, to what extent HOTS are realized in connection to the demand of the current curriculum, and how the implications regarding the implementations is. This information assist the creation of HOTS-based reading comprehension questions.

Pedagogically, the research is expected to bring a new insights for teachers and educational stakeholders pertaining to the realization of HOTS in reading comprehension questions. This leads to the formulation of future alternative to promote HOTS in the classroom context and in education as a whole.

## **1.6 Definition of Key Terms**

There are some key terms used in this present research which are explained below.

### **1.6.1 Textbook**

Textbook is defined as a manual that comprises instructions on certain subject to assists teacher and learner to meet the objectives of the subject, Eruchalu (2012). Hutchinson and Torres (1994, p. 327) also added that “textbook is a visible and workable framework around which the many forces and demands of the teaching-learning process can cohere to provide the basis of security and accountability that is necessary for purposeful action in the classroom”. In conclusion we can say that textbook is an important component to enable teaching and learning process work as what the intentional objectives and intentional actions have been designed. The Textbooks which are used in this present study entitled “Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017” published by the Ministry of Education and Culture.

### **1.6.2 Higher Order Thinking Skills**

Maeier (1933, 1937) in Lewis & Smith (1993) stated that higher order thinking skills (HOTS) mostly deals with experiences that are unfamiliar and not being continuously repeated. Newman (1990) in Lewis & Smith (1993) defined Higher Order Thinking Skills (HOTS) as the skills that demand the ability to interpret, analyze, or manipulate information instead of the ability of applying the previous acquired information. Those two definitions lead to the understanding that Higher Order Thinking Skills (HOTS) are skills that are not in the level of restating the

prompt information to solve the given problem, but it more likes the analysis and manipulation of information to solve an unfamiliar problem.

### **1.6.3 Reading comprehension**

Kirby (2007) defined reading comprehension as a process of understanding the text that is read. Taylor (2018) stated that reading comprehension is the ability to derive meaning from text. It can be deduced that reading comprehension is the process of constructing meaning from the text that is read.

### **1.6.4 Reading Comprehension question**

Day and Park (2005) mention that in order to assist students in getting meaning from the text that is read, comprehension questions are created. From Day and Park's statement, it is obvious that comprehension questions are the questions that come following the text to guide students recalling the information from the text and also making meaning from the text.

## **1.7 Scope of the study**

This research is a content analysis examining reading comprehension questions found in textbooks entitled "Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017" published by the Ministry of Education and Culture. The questions are analyzed based on cognitive level of Bloom's Revised Taxonomy (2001) and task types of Numrich's Sequence (Beaumont, 2010). The research aims at explaining HOTS realization based on the two frameworks. The analysis result on the realization of HOTS is compared to the 2013 curriculum. The discussion other than that is not provided in this research.

## **1.8 Outline of The Report**

This present research comprises five chapters which are followed by subchapters.

The organization of those chapters are mentioned bellow:

Chapter I is introduction. In this chapter, the discussion is on the aspects of background of study, reasons for choosing the topic, research questions, objectives of the research, significance of the study, definitions of key terms, scope of the study, and outline of the report. These become the groundwork of the present research.

Chapter II is review of related literature. It consists of three subchapters, they are: review of previous studies, review of theoretical background, and theoretical framework. Those theories used as a bases to analyze and discuss the results of the research. Review of previous studies contained 23 national and international journals discussing research on textbooks, HOTS, and reading comprehension questions. Review of theoretical background focuses on the theories and bases knowledge used in this research. It comprises eight subsections, they are: textbook, bloom's revised taxonomy, Higher Order Thinking Skills, Numrich's sequence, 21<sup>st</sup> century skills, 2013 curriculum, reading comprehension, reading comprehension questions, and content analysis. Lastly, theoretical framework which comprises a figure depicting the conceptual structure of the research covers the information of the background of the research, the research questions and the instruments of the research.

Chapter III is research methodology. It elaborates the research approach, object of the study, unit of analysis, type of data, instrument of the research, roles

of researcher, procedure of data collection, procedure of data analysis, and triangulation. This is a content analysis using descriptive qualitative research approach which describes how HOTS are realized in the textbooks for three different grades. Type of data in this research is document that are taken from the textbooks. The unit of analysis are reading comprehension questions in the textbooks. Then, the data are analyzed through three steps: data reduction, data display, and conclusion drawing and verification. Lastly, the triangulation of this research used triangulation by source of data and by theories.

Chapter IV comprises the findings and discussions. The findings are structured to directly engage with the research questions. The first findings answer the first point of research questions regarding the realization of HOTS in the reading comprehension questions in the textbooks for grade X, XI, and XII. Based on two frameworks, it is revealed that HOTS are adequately realized only in the textbook for grade XI. The reading comprehension questions in the textbooks for grade X and XII emphasize LOTS more than HOTS. Lastly, in terms of the relevant to the curriculum 2013, the realization of HOTS in the three textbooks seems to be less compatible with the standards set by BSNP.

Chapter V comprises conclusions and suggestions. The conclusions conclude the overall findings of the research. Then, the suggestions part give suggestions that are drawn from the findings of the research. The suggestions are given for the education stakeholders and also future researches.



## **CHAPTER II**

### **REVIEW OF RELATED LITERATURE**

This chapter presents three main points, which are: review of related studies, review of theoretical studies, and theoretical framework. Review of previous studies is a review of previous researches which closely related to the present research. Review of theoretical studies is a review of previous theories used in this present research. The last point is theoretical framework which depicts why and how this present research is carried out.

#### **2.1 Review of the Previous Studies**

Many studies pertaining to textbook analysis, Higher Order Thinking Skills (HOTS) analysis, and reading comprehension questions analysis are widely conducted. Here is the review of the previous related studies regarding those issues. The discussion focuses on seeing the differences between the previous studies and this present study.

##### **2.1.1 Research on Textbook**

First thing first is the discussion of research on textbook. Islam (2013) analyzed English textbooks for 9<sup>th</sup> and 10<sup>th</sup> grade viewed from teachers' perspectives focusing on six aspects, such as, attractiveness of the text and physical make up, subject and content, exercises and activities, language type, language skills, and context and its efficacy based on the standard textbook. The research was a descriptive research using questionnaire and two open-ended questions to collect the data from 45 males and females Bangladeshi teachers as the participants. The

findings showed that the degree of evaluation for those aspects was rated moderate. Regarding the question whether the textbook was effective in term of the standard textbook or not, it was found that they had mixed perceptions.

Similar research was also conducted by Akbar (2016) investigating the content of two selected eleventh grade English textbooks based on BNSP framework. The research was a descriptive qualitative research focusing on three things: relevance of materials with competency standards and basic competencies, material accuracy, and supporting learning materials. In term of relevance of materials with competency standards and basic competencies, the textbook 1 was classified good, while textbook 2 was rated fair. Regarding material accuracy, textbook 1 was rated high, in comparison, textbook 2 was rated good. Last but not the least, in the discussion of supporting learning materials, either textbook 1 or textbook 2 was rated fair.

Similar analysis was conducted by Parviz and Iman (2013) which focused on investigating the inclusion of critical thinking in EFL textbooks. Three English textbooks namely, Top Notch, Interchange, and English files series were analyzed. In order to conduct the analysis, a critical thinking Likert-scale checklist containing twelve skills was developed. The data were analyzed using descriptive and inferential statistics. The result showed that the textbooks mainly tapped the skills of knowledge, comprehension, application and building community of thinkers skill and failed to acceptably include other skills which were important for students' success.

A different analysis of textbook was carried out by Herlinda (2014) observing teachers' perspective towards textbook and the strategy of using the textbook in the teaching learning activities. This was a qualitative research which used three ways of data collection: observation, questionnaire, and interview. The research involved two EYL teachers from different background of teaching experience and different school of teaching. The findings revealed that both teachers agreed that textbook provided materials and activities aspects in language learning, guided teachers in giving homework and created standardized instruction, and also gave idea in making lesson plan. However, they did not use textbook as a syllabus. Besides, it was found that in practice, both teachers used more than one textbook as reference for an additional materials. Last but not the least, in terms of the use of textbook in practice, teacher A relied on textbook so much more than teacher B. In conclusion, it could be seen that the adaptation of textbook was not influenced by the experience of teaching but more influenced by the teacher's background, knowledge, and also attitude in learning.

Quite different research on textbook was carried out by Roohani (2012) focusing on the representation of male and female actors in summit 2B (i.e. the advanced book of Top Notch series) using a qualitative research. Framework from Van Leeuwen (1996) regarding social actor and Halliday (2004) regarding transitivity model were used. Content analysis was also used to find out the frequency and proportion of various social actors. The findings indicated that there were several significant differences between males and females regarding role allocation (i.e. activation, subjection, and beneficialization), substitutions (i.e.

personalization and impersonalization), and personal pronouns. Males were portrayed as more active, energetic, independent, and assertive forces compared to females. Besides, males were put more frequent and in the higher status and positions, they were also individualized more frequently. Although the textbook was almost equally informalized and indetermined, a little attempt regarding gender bias was made in the Summit 2B textbook (ELT textbook used in Iran).

Last but not the least, research on the analysis of developing Higher Order Thinking Skills (HOTS) module for weak English for Second Language (ESL) learners was conducted by Singh et al. (2018). The study aimed at developing and validating Higher Order Thinking Skills (HOTS) module for teaching writing to weak ESL learners. The participants of this research were two teachers with 5 and 10 years teaching experience and also 45 students from two different Secondary schools in Kedah and Johor. It was a qualitative research using three stages of data collection technique: document analysis, interview, and observation and validation. The module used was developed based on the Form Two syllabus. The module was developed under ADDIE (analysis, design, development, implementation, and evaluation) process. The findings revealed that HOTS module affected positively on students in learning writing and students enjoyed the teaching and learning process using the module.

Numerous researches on textbook show how textbook plays an important role in teaching-learning activity. The present research confirms similarity with the previous researches in terms of object of the research which is textbook. However, unlike some previous researches which investigated discourse, content

appropriateness, textbook development, or perception on the use of textbook, this present research examines the content of the textbooks that specifically focuses on the reading comprehension questions found in English textbooks.

### **2.1.2 Research on Higher Order Thinking Skills**

The integration of Higher Order Thinking Skills (HOTS) in education is a crucial issue nowadays. Hence, study on the urgency of implementing HOTS was investigated by Pratama and Retnawati (2018). The research aims at analyzing the urgency of HOTS implementation in mathematics textbook. HOTS is one of the main goals in education that is designed. HOTS can be developed, but cannot be automated. It needs platform to implement HOTS to train the skills for students. Textbook is a learning media that can be used to train HOTS since textbook becomes a learning source for teachers and students. Thus, it can be said that the more HOTS content in the textbook, the greater opportunity to practice HOTS for students.

Noting the urgency to develop HOTS in textbook, Shafeei et al. (2017) conducted a research concentrating at the question types used by ESL English teachers in Malaysia and the challenges they faced in incorporating HOTS in teaching-learning process. Classroom observation, interviews, and questionnaires involving twelve English secondary school teachers, eleven female teachers and one male teacher of secondary, were used to collect the data. Statistical description was employed to convey the findings which revealed that display question was employed more compared to referential questions. It could be deduced that Higher

Order Thinking Skills (HOTS) were used minimally. There were two kinds of challenges faced by teachers in incorporating HOTS which were: students' attitude and teachers' perception (teachers' knowledge, attitude, and skills).

Correspondingly, a research investigating teacher's perception, challenges and strategies in implementing HOTS was also conducted by Wilson and Narasuman (2020). The research aimed at investigating teachers' challenges and strategies in integrating HOTS in SBA. It was a descriptive quantitative research adopting survey design through questionnaire. The participants of the research were Malaysian secondary school teachers involved in the implementation of School Based Assessment (SBA). The results revealed that teachers understood HOTS and the implementation. However, they still faced challenges in constructing and administering HOTS. In order to integrate HOTS, teachers employed various strategies, such as, understanding how to apply thinking level according to the topic taught, using Test Specification Table (TST) to construct questions, referring, adapting, or adopting instrument from the reference book, and applying various methods of scoring HOTS.

Similarly, Mursyid and Kurniawati (2019) conducted a qualitative research exploring HOTS among English teachers across generation in EFL classroom. The research involved senior High School teachers from different generations at SMAN 2 Cianjur. The purpose of the research were finding out teachers' perception towards HOTS, the implementation of HOTS in the classroom, and the constraints faced by teachers in applying HOTS. In order to collect the data, open-ended questionnaire, document analysis of teachers' lesson plan, and interview were

chosen. The findings revealed that (1) different teachers from different generations had different perceptions on the implementation of HOTS which were influenced by age and experience; (2) different teachers had different students' activities in the teaching-learning process. This difference was influenced by experience and teaching hours; (3) the challenges faced by teachers in implementing HOTS in EFL classroom were: teachers' limited knowledge in choosing operational words, lack of experience in making lesson plan based on thinking level which was suitable with basic competence, lack of creativity in designing classroom activity, and lack of frequency in practicing students' metacognitive and thinking skills.

Distinctively, Tyas et al. (2020) conducted a research investigating the role of teacher and textbook in cultivating HOTS in EFL classroom. The research intended to explore the role of English teachers and English textbooks in cultivating students' HOTS through English language teaching. It was a descriptive qualitative study which focused on one of state senior high schools in East Java. The participant was an English teacher of eleventh grade. This study used questionnaire, interview, and observation to collect the data. The research showed that the English teacher had adequate understanding on HOTS. However, they were too much dependent on the materials and exercises provided in the textbook. In addition, students found it difficult to understand the exercises promoting HOTS due to their low level of English language proficiency. Dealing with those cases, teachers helped students to understand the materials and exercises promoting HOTS. Hence, it was found that the English teachers and the textbooks played such a symbiotic mutualism in promoting students' HOTS.

Quite different research regarding HOTS was conducted by Ahiri et al. (2015) directing a factorial experimental research particularly explore the effect of teaching HOTS through different learning strategies toward students with different learning styles. The research intentionally investigated three things: a comparison of teaching HOTS through contextual teaching and learning (CTL), collaborative learning, and competitive learning strategy, a comparison of HOTS from students with different leaning styles (visual, audio, kinesthetic), and a comparison of the interaction effects between learning strategies and learning styles on students' HOTS. The population of the study was 270 students from Faculty of Education Halu Oleo University, and Muhammadiyah University Kendari, Indonesia. Questionnaires and achievement test were used to collect the data. The results found the effectiveness of teaching HOTS using CTL and collaborative learning. Based on the students' learning style, students with visual learning style were doing better in HOTS compared to those who with kinesthetic and auditory learning styles. Lastly, regarding the interaction effects, there was an interaction effects because of the different learning strategies used towards different students' learning styles.

A thoroughly new insights regarding HOTS was brought by Indah and Kusuma (2016) who carried out a research aimed at exploring Indonesian students' critical thinking and factors affecting HOTS development. The research was a case study using writing assessment and questionnaire to gain data from 130 students of English Department of UIN Maulana Malik Ibrahim Malang. The findings showed that students' critical thinking in writing in terms of argument, evidence, and organization were in the pre-intermediate level, while in terms of content and



conclusion were in the elementary level. Based on the questionnaire regarding factors affecting the development of critical thinking, the correlation between critical thinking and other factors, such as cultural background, family background, and learning strategies, was weak. However, the relationship was in the positive direction which impliedly showed the influence of cultural background and learning strategies in developing critical thinking.

Likewise, research regarding students' performance of HOTS was presented by Yuliati and Lestari (2018) exploring students' performance in solving HOTS questions in higher education. The research was a qualitative research involving students of Elementary School teacher education program taking instructional evaluation course who were classified into three groups of students: students with high learning abilities, moderate learning abilities, and low learning abilities. In order to collect the data, the researcher used descriptive questions containing analysis, evaluation, and creation cognitive levels. The findings showed that three students were in excellent level, four students were in good level, two students were in enough level. However, students found weakness in creation of cognitive level. Hence, it was recommended that students needed more practice in creation of cognitive level in the expectation they could facilitate HOTS questions for their future students.

Quite different with the previous research, Cesarandari et al. (2019) exploring the implementation of HOTS in Spoken Analytical Exposition in Oral Presentation Assessment. This aimed at determining students' performance in applying HOTS in Spoken Analytical Exposition in Oral Presentation Assessment.

It was a qualitative research using observation and field notes as data collection technique. The results showed that HOTS had been fulfilled in the Spoken Analytical Exposition in Oral Presentation Assessment. The teachers gave HOTS-based questions based on the topic chosen by the students. Mostly the questions began with comprehension and applying, then followed by analyzing, evaluating, and creating. Secondly, it was found that students were able to develop questions given by teachers in to a spoken analytical and engaged with PPT they used in doing presentation.

In contrast, a research exploring the use of ICT to promote HOTS was carried out by Ganapathy et al. (2017). The study mainly focused on promoting higher order thinking skills via teaching practice. The research aimed at examining the level of awareness using ICT tools and resources among the English language lecturers in terms of their frequency of use, type of learning activities promoting HOTS and level of usage. This study was both quantitative and qualitative approaches employing questionnaire and semi-structured interview. The research invited 40 full-time ESL lecturers teaching English major courses in a public research university in Malaysia. The result showed that: (1) the lecturers used various ICT tools, such as, desktop application, presentation software, internet, and web 2.0, to learn in a more interactive way and liven students' enthusiasm; (2) the lecturers frequently used HOTS activities in their lectures. The activities employing HOTS were in the form of finding answers from assigned tasks, brain storming, problem solving, and oral presentation; (3) the lecturers encountered challenges in terms of ICT skill and changing the current teaching practice to integrate ICT tools.

Finally, teaching HOTS could enhance students' achievement. This evidence is brought by Tanujaya et al. (2017) who conducted a research on investigating the relationship between teaching HOTS and students' performance in mathematics instruction. The research was conducted using correlation research method which involved students of mathematics education in University of Papua who had completed 120 credits. The research revealed that those two variables were highly correlated. Both statistics show that there is a significant relationship between HOTS and students' academic achievement.

From the overview of some researches, there are similarities in terms of HOTS as a focus in conducting research and bloom's taxonomy as a framework to analyze HOTS. However, unlike the previous researches which focused on HOTS implementation and the challenges; HOTS in the assessment; HOTS based on teachers' perspectives; and the strategies to apply HOTS in learning and teaching activities; or the integration of ICT in promoting HOTS, this present research mainly focuses on investigating the realization of HOTS in reading comprehension questions in English textbooks. Moreover, the previous researches differs with this present research in terms of data collection method. The previous researches used questionnaire, interview, observation, and test to collect the data. In this present research, the data are collected through documentation, instead.

### **2.1.3 Research on Reading Comprehension Questions**

An analysis of reading comprehension questions was carried out by Tangsakul et al. (2017) analyzing cognitive level found in reading sections of English textbooks

entitled team up in English 1-3 grade 9 compared to the analysis of question items in NET test. Qualitative and quantitative methods were chosen to deliver the result. The findings showed that question items in NET test were dominated by Lower Order Thinking Skills (LOTS) in the academic year of 2013-2016. In addition, the questions in English textbooks were also dominated by LOTS compared to HOTS.

Another similar research was conducted by Barashid (2020) examining wh-questions following reading texts in the textbook entitled flying high for Saudi Arabia. The main aim of the research was to find out to what extent cognitive levels of the questions were properly included. This research was a content analysis research using revised cognitive domain of Bloom's taxonomy as the tool of analysis. The research showed that either lower or higher categories of cognitive level are not properly included. It is found that the textbook overemphasized LOTS, with remembering as the most dominant category, but HOTS are somewhat neglected.

Quite similar research was conducted by Setiyawati (2016) investigating cognitive level of Bloom's revised taxonomy in textbook entitled "Bahasa Inggris" for grade 11 by Kemendikbud 2014. The research focused on three points: (1) the types of reading comprehension questions; (2) the thinking skills found in the reading comprehension questions; and (3) the suitability of the reading comprehension questions for 11<sup>th</sup> graders. The research found that although the reading comprehension questions do not cover all the categories of cognitive skills, the questions are dominated by HOTS. Therefore, the textbook is suitable for 11<sup>th</sup> grade students.

Another similar research by Ulum (2016) managed to conduct a descriptive content analysis of a reading comprehension questions in a course book Q: skills for success 4 reading and writing according to Bloom's taxonomy. A descriptive content analysis was employed to analyze the data. From the analysis, it was found that the reading comprehension questions were lack of higher order level cognitive skills. The reading comprehension questions were dominated by knowledge with 51% and comprehension with 49%.

A bit different research was conducted by Rahma (2019) which analyzed reading comprehension questions in a final test made by English teacher of SMA N 2 Sidoarjo according to Barret's taxonomy. The data of this research were in the form of document using purposive sampling technique to collect the data. The research found that the reading comprehension questions were dominated by lower level than higher level. From 137 questions, there were 40 questions belong to literal level, 87 of inferential level, 8 of evaluation level, and 2 of appreciation level. Furthermore, it was also found that the taxonomy did not equally cover the questions. Hence, the questions were classified as moderate.

Lastly, an analysis of reading comprehension questions in an English textbook grade XI was conducted by Permatasari (2012). The analysis focused on observing the critical thinking on the reading comprehension questions on the textbook. This was a descriptive qualitative research using Bloom's taxonomy (1956) and task types of Numrich's sequence (Beaumont, 2010) to analyze the questions. The research found that majority of the questions were in the comprehension category of cognitive level. Furthermore, it was revealed that most

of the questions were structured to focus on the text. This case happened since the questions were design for the aim of reading comprehension questions.

Various studies regarding reading comprehension questions are conducted. The analysis on reading comprehension questions in the previous researches confirm similarity with the current research in terms of the framework that is used and also the main concern of the analysis which is reading comprehension question. However, the main difference is on the textbooks that are analyzed. Those previous research only focus on the textbook for one grade only; in comparison, this present research analyzes three different textbooks for three different grades. In addition, this present research is different with the previous researches in terms of the research design. Some of the previous researches used quantitative and combination of quantitative and qualitative research. In contrast, this present research uses qualitative research only.

## **2.2 Theoretical Review**

In this section, the discussion falls to the following parts: theories related to textbook, 21<sup>st</sup> century skills, Bloom's Revised Taxonomy: cognitive domain, Higher Order Thinking Skills (HOTS), Numrich's Sequence, 2013 curriculum, reading comprehension, reading comprehension questions, and content analysis.

### **2.2.1 Textbook**

Textbook is a paper-based materials design which comprises specific design for teachers, students, and students' work-book linked together (Oates, 2014).

Textbook is defined as a manual that assists teachers and learners to meet the objectives of a subject (Eruchalu, 2012). In other words, we can say that textbook is a realization of objectives of a subject in the form of paper-based design which serves as a guidance for teachers and learners.

In conjunction with the mentioned explanation, textbook holds a substantial role in education. O’Keeffe (2013) stated that textbook is purposefully designed in order to realize a specific vision of a curricula. In realizing the vision, textbook is completed with several components. Cunningsworth (1995, p.7) stated that several components are equipped in the textbook such as materials, activities for students’ practice, syllabus (when reflected the objectives that have been determined). It is also intended to support less experienced teachers to build confidence. In terms of the textbooks’ content, Bojanic` and Topalov (2016) also added that textbook covers language and cultural elements, provides students’ needs, cultural background, and language proficiency level. Those elements are included in order to cater the aspects stated in the curriculum’s vision that are aimed to be realized.

The realization of those aspects shares huge benefits for students and teachers. For students, textbook helps them catch up with materials they missed. It is explained that there might any possibility when students missed certain materials in class. In this case, students will not find it hard to catch up with it. In addition, the next materials that will be learnt are already stated in the textbook. This exactly helps students in coping up with the materials they learn and also make a preparation for the advance learning (O’Neill, 1982).

For teachers, Anjaneyulu (2014) stated that guidelines concerning syllabus, teaching methodologies, and the materials to be taught are available in the textbook.

Oates (2014) mentioned that textbooks manifest a series of vital features, such as:

Underpinning by well-grounded learning theory and theory regarding subject-specific content, clear delineation of content – a precise focus on key concepts and knowledge, coherent learning progression within the subject, stimulation and support of learner reflection, varied application of concepts and principles – ‘expansive application’, and control of surface and structural features of texts to ensure consistency with underpinning learning theory (p.4).

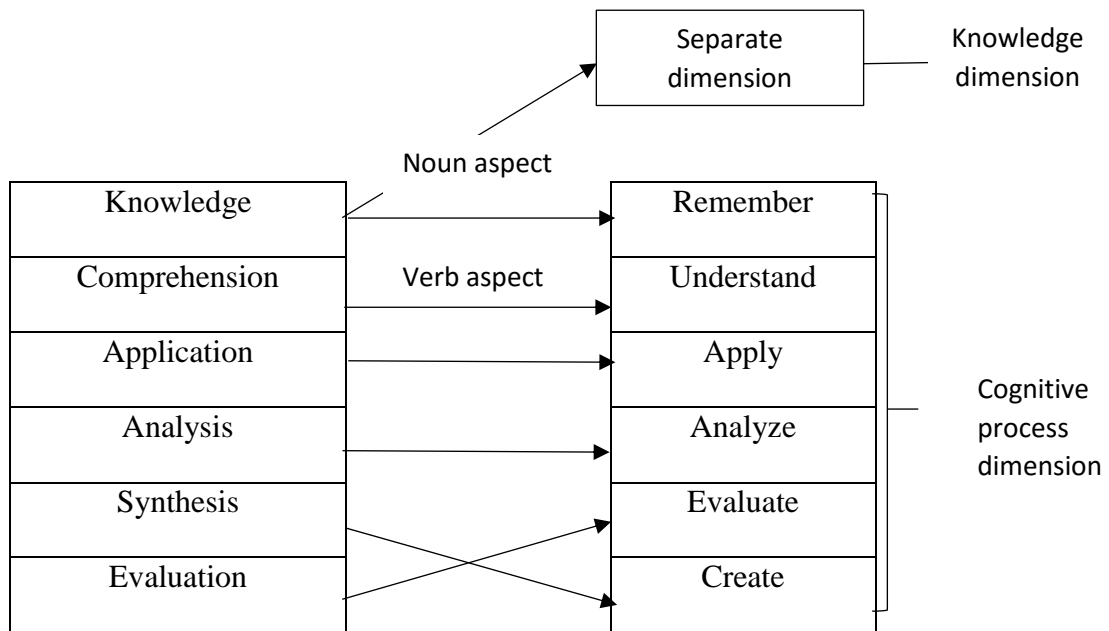
Those aspects provide condensed content to support teachers in holding teaching-learning activity. Most importantly, those aspects can be carried out by different teachers in different ways. Thus, those components ease teachers in deciding what the most appropriate things for their classes are (Bojanic` & Topalov, 2016) and also provide fundamental components to be developed in different creative ways. Hence, it is undeniable that textbooks survive and prosper due to its significance in providing the structure required in teaching and learning process (Hutchinson & Torres, 1994).

In conclusion, textbook is a tool to cover the needs that arise from the classroom and broader context in relation with them (Hutchinson & Torres, 1994). Textbook becomes a realization of curriculum’s vision that is able to accomplish the needs that rise from the education stakeholders and classroom activity. Furthermore, aside from the accomplishment of the needs, textbook also shares benefits for the education stakeholders.



### 2.2.2 Bloom's Revised Taxonomy: Cognitive Domain

Benjamin S. Bloom, Associate the Board of Examinations of the University of Chicago initiated an idea for annual comprehensive examination. To aid his effort, he enlisted a group of specialists coming from across the US who faced the same problems. The group considered the progress, make revision, and plan the next steps (Krathwohl, 2002). Until finally, their final draft was published in 1956 under the title *Taxonomy of Educational Objectives: The Classification of Education Goals. Handbook 1: Cognitive Domain* (Bloom et al. 1956 in Krathwohl, 2002). This was then known as the Original Taxonomy. Revision was made 45 years later by Anderson and Krathwohl which is now the taxonomy named Bloom's Revised Taxonomy (Anderson, Krathwohl et al. 2001 in Krathwohl, 2002). In revision, several changes were made which mark the distinctions between the original taxonomy and the revised taxonomy. The title of some categories was renamed for example *knowledge* becomes *remember* and *comprehension* becomes *understand*. In addition, the changes of the categories order were also made, *create* is in higher level than *evaluate*. The detail changes can be seen below (Anderson & Krathwohl, 2001, p.263).



**Figure 2.1** Structural changes from original taxonomy to revised taxonomy

Bloom's revised taxonomy contains six categories of cognitive process. The revised taxonomy invites the educators to expand the learning activity from remembering to higher level categories of cognitive processes. This aims at instructing students to experience different activities since each of the cognitive process represents different level of complexity. For instance, understand is believed to have more complexity compared to remember, and so on, (Anderson & Krathwohl, 2001, p.63). To sum up, those categories of cognitive level provide path for students to learn, practice, and experience different thinking level. In order to know deeper the definitions and examples of each category in cognitive level, Table 2.1 contains the information of the cognitive level (Anderson & Krathwohl, 2001, p. 67).

**Table 2.1** Cognitive dimension of Bloom's revised Taxonomy (2001)

Categories and Cognitive processes	Alternative names	Definitions and Examples
1. Remember- retrieve relevant knowledge from long-term memory		
1.1 Recognizing	Identifying	Locating knowledge in long-term memory that is consistent with presented material
1.2 Recalling	Retrieving	Retrieving relevant knowledge from long-term memory
2. Understand- construct meaning from instructional messages, including oral, written, and graphic communication		
2.1 Interpreting	Classifying, paraphrasing, representing, translating	Changing from one form of representation
2.2 Exemplifying	Illustrating, instantiating	Finding a specific examples or illustration of a concept or principle
2.3 Classifying	Categorizing, subsuming	Determining that something belongs to a category (e.g. concept or principle)
2.4 Summarizing	Abstracting, generalizing	Abstracting a general theme or major point(s) (e.g. write a short summary of the events portrayed on a videotape)
2.5 Inferring	Concluding, extrapolating, interpolating, predicting	Drawing a logical conclusion from presented information (e.g. in learning a foreign language, infer grammatical principles from examples)
2.6 Comparing	Contrasting, mapping, matching	Detecting correspondences between two ideas, objects, and the like

Categories and Cognitive processes	Alternative names	Definitions and Examples
2.7 Explaining	Constructing, models	Constructing a cause-and-effect model of a system
3. Apply- Carry out or use a procedure in a given situation		
3.1 Executing	Carrying out	Applying a procedure to a familiar task
3.2 Implementing	Using	Applying a procedure to an unfamiliar task
4. Analyze- break materials into constituent parts and determine how the parts relate to one another and to overall structure or purpose		
4.1 Differentiating	Discriminating, distinguishing, focusing, selecting	Distinguishing relevant from irrelevant parts or important from unimportant parts of presented materials (e.g., Distinguish between relevant and irrelevant numbers in a mathematical word problem)
4.2 Organizing	Finding coherence, integrating, outlining, parsing, structuring	Determining how elements fit or function within a structure
4.3 Attributing	Deconstructing	Determine a point of view, bias, value, or intention underlying presented materials
5. Evaluate- make judgements based on criteria or standards		
5.1 Checking	Coordinating, detecting, monitoring, testing	Detecting inconsistencies or fallacies within a process or product; determining whether a process or product has internal consistency; determining the effectiveness of a procedure as it is being implemented

Categories and Cognitive processes	Alternative names	Definitions and Examples
5.2 Critiquing	Judging	Detecting inconsistencies between a product and external criteria; determining whether a product has external consistency; detecting the appropriateness of a procedure for a given problem
6. Create- put elements together to form a coherent or functional whole; reorganize elements into a new pattern or structure		
6.1 Generating	Hypothesizing	Coming up with alternative hypotheses based on criteria (e.g. generate hypotheses to account for an observed phenomenon)
6.2 Planning	Designing	Devising a procedure for accomplishing some tasks (e.g. plan a research paper on a given historical topic)
6.3 Producing	Constructing	Inventing a product (e.g. build habitats for a specific purpose)

In summary, bloom's revised taxonomy is a taxonomy created to translate certain learning objectives into more specific instruction of activities. The cognitive domain depicts different cognitive level with different complexity. Each higher level of cognitive level comprises higher complexity. Hence, in education, it is expected that the activities range variously from the lowest level to the highest level of cognitive process.

### 2.2.3 Higher Order Thinking Skills

Brookhart (2010. p 3) defined Higher Order Thinking Skills by categorizing it in three different terms:

- 1) Definition of Higher Order Thinking Skills in terms of Transfer is seen as the ability of students in applying the knowledge and skills they already learnt in a new context or in an unfamiliar context.
- 2) Definition of Higher Order Thinking Skills in terms of Critical Thinking is seen as an ability to give a judgment. In this sense, students are demanded to be able to reason, reflect, which finally make a decision.
- 3) Definition of Higher Order Thinking Skills in terms of Problem solving is an ability to solve problems both in academic field and in life. In these terms, students are demanded to be able to identify and finally create a new solution towards the given problem.

Brookhart (2010, p. 39-124) further emphasized several categories that can be used to assess Higher Order Thinking Skills like:

- 1) Top end of Bloom's Taxonomy:

- a) Analyze

Several activities are recognized as analysis thinking level when it involves:

- (1) task to break down information and make reason of it; (2) make description of the parts and find out the relation of each part; (3) task to differentiate and organize some parts to solve a problem than elaborate the reason of their relation.

#### b) Evaluate

Several activities are considered in the evaluation level of thinking when students are demanded to give a judgement regarding a material based on certain criteria.

#### c) Create

In this level, the ability to organize the existing things to make something new is shouted. It includes the ability to generate solutions, plan a procedure to solve certain problem, or create something new.

### 2) Logical reasoning

This concerns with the ability of giving judgement if certain claim or assumption is true or relevant. Besides, it also emphasizes the ability to see the consistency of a given discussion. There are two types of reasoning: deduction and induction. Deduction reasoning means that the following reasoning of certain premise is the conclusion of the principles mentioned in the given premise. In comparison, induction reasoning makes reasoning from instances or from instances to principles. Means, reasoning might be generated from instances presented.

### 3) Judgement and critical thinking

Critical thinking is giving a wise judgement to a certain situation. In order to give a wise judgement, several processes can be employed in order to assess the ability to use a critical judgement: evaluating credibility of an information, identifying assumptions implicitly stated in that information, and identifying rhetorical and persuasive method.

#### 4) Problem solving

Problem solving concerns with the ability in solving problems, in this term, is intended goal. The given problem here is unusual or unfamiliar one for students.

#### 5) Creativity and creative thinking

Creativity means observing thing, creating something new using unusual or unconventional thing. In this term, creativity involves the process of evaluation.

In conclusion, we can say that Higher Order Thinking Skill (HOTS) are the ability beyond stating the previous information. More than that, HOTS involve the activities such as, analyzing, evaluating, creating, dealing with the ability of problem solving, critical thinking, and creativity or creative thinking.

#### **2.2.4 Numrich's Sequence**

Numrich's sequence is a framework created by Columbia University's Carol Numrich. The framework doesn't give the direct decision of the task for students. Rather, the framework functioned as a tool for teacher to plan teaching-learning activity. In addition, the framework raised the teachers' awareness of the specific purpose and direction of the activity they gave for students. The sequence underline seven task types which are grouped into three categories (Beaumont, 2010). The Numrich's sequence is elaborated below (Beaumont, 2010).



**Table 2.2** Numrich's sequence

<b>Perspective</b>	<b>Critical thinking</b>	<b>Skills practiced</b>
Focus on the students' world	Observing	Looking, listening
	Identifying assumptions	Sharing background expressing opinions clarifying values
Focus on the text	Understanding and organizing	Summarizing, Distinguishing relevant details, Ordering, Classifying, Comparing and contrasting, Explaining cause and effect
	Interpreting	Making inferences Interpreting meaning Hypothesizing, Theorizing
Focus beyond the text	Inquiring further	Surveying the public Interviewing a specialist Researching
	Analyzing and evaluating	Synthesizing information Critiquing Reflecting on related ideas Making logical conclusion Reevaluating assumption
	Making decision	Proposing solutions Problem solving Taking action Participating

Those skills are elaborated below:

(1) Observing

Observing is a part of critical thinking which suits as a basic process of analysis. It is translated into a task type like a pre-reading task to push students to engage with specific details, main text, and other components before reading a text. It involves the activities, such as, looking, listening, noticing and naming. Its importance falls into three points: (a) providing vocabulary and grammar at the beginning to explore

the topic of the text actively (b) introducing and giving opportunity to discover what they already knew pertaining to the topic (c) encouraging students to engage with language and content of the given text. This aimed at preparing students to explore deeper on the text and enriching linguistic and conceptual framework to engage with the text.

## (2) Identifying assumptions

Identifying assumptions is conducted before students engage with the text. It specifically focuses on students' realm experiences before going into the main text. It gives students wide opportunity to share their backgrounds, opinions, or current thoughts regarding the value of the main text. This stage is purposefully conducted to widen students' perspective regarding the topic since they get more source. Similar with the previous stage, it is expected that students are more prepared and secure to go through the given text.

## (3) Understanding and organizing

This process is no longer focusing on the students' world, but on the activity of comprehending text. It demanded students to demonstrate what they got after reading a text, listening interview, or looking at an image. In order to do this, students are asked to find main idea and detail information to further do classifying or categorizing information, comparing and contrasting information, finding out causes and effects, or summarizing. These tasks are built to create a solid understanding of a text which can lead students to go deeper on the text and produce judgements beyond the literal level. Hence, these first three steps are essential in enabling the critical thinking to happen.

#### (4) Interpreting

Interpreting mainly encourages students to find deeper meaning from a literal surface of a text. However, this task still focuses on the primary text instead of personal judgement. It includes the activities of inferring, interpreting, and hypothesizing. Those activities are conducted by examining the information and evidences given in a text. When they come up with an interpretations, inferences, hypotheses, or theories, there should be logical reasoning or in other words, a textual basis. In short, there must be a clear base in every inference or hypotheses made.

#### (5) Inquiring further

This stage guides students to go deeper from interpreting. In this process, students are demanded to collect and add more information regarding the topic they are in. This can be carried out by doing public survey, interviewing specialist on the topic, and doing internet or library research. Through these tasks, students are able to enlarge their knowledge from different source and direction. Hence, this will ease students to do further process of critical thinking, which is analyzing and evaluating.

#### (6) Analyzing and evaluating

Analyzing and evaluating mainly discusses the process of getting deeper into a text from additional sources through different medium. This encourages students to analyze and evaluate information from other sources they already collected altogether. The information might be collected from reading text, listening interview, or written report. These tasks could lead students to go deeper on the topic, maintain the interest, and develop more as they gain new wider sources. At

this stage, the assessment that might be employed is writing or speaking in order to assess students' progress in critical thinking.

#### (7) Making decision

This term pushes students to device critical thinking skill based on a certain condition. This covers larger context ranging from class activity to non-class activity. In other words, we can say that this skill walks between classroom activity and real-life activity. Students are directed to transfer the knowledge they obtain from the classroom activity into real-life activity. This activity can be created by teachers, but initiative performance from students is an ideal one. This is portrayed as the activity to find solution of a problem and to make a decision based on a certain situation.

From those elaboration, it can be inferred that Numrich's sequence is a framework to assess critical thinking. In assessing critical thinking, there are three categories which are translated into more detail types of activities ranging from the very basic type to the complex one. Those types of activities go hand in hand in creating a correlated assessment of critical thinking.

### **2.2.5 21<sup>st</sup> Century Skills**

21<sup>st</sup> Century skills contain several skills that are necessary to be equipped in this century. Joyness et al. (2019) explained that 21<sup>st</sup> century learning was developed by US-based Partnership for 21st Century Learning (P21) which underlined 4cs' skills (critical thinking, communication, collaboration, and creativity). These current

challenges demand individuals to have those 4 skills in order to compete. The four skills are elaborated as follows:

- 1) Critical thinking refers to the ability of accessing, analyzing, and synthesizing information. This skill is demanded not only in the educational field, but also in wider field of life.
- 2) Communication is defined as the ability to articulate opinion and also thought clearly and persuasively both in oral or written form. This also emphasizes the ability of communication in information, media, and ICT competencies.

### 3) Collaboration

The portrayal of future workforce is like a situation which demands the worker to have a high collaborative work with separated colleagues by distance and also resource of physical information. The key skills needed to engage with the situation are the skill to work collaboratively, the skill to be literate in technology, and also the skill to communicate clearly and effectively. In order to be able to compete in that kind of situation, individuals need to have these skills.

### 4) Creativity

Creativity is defined as the capacity to come with a fresh new ideas and solutions. In this rapid development, innovativeness and creativity are highly needed in order to gain professional and personal success.

21<sup>st</sup> century skills are expected to be owned in this 21<sup>st</sup> century. The skills range from the ability to think critically, communicate effectively, work collaboratively, and be creative. Those four skills are interrelated one another which

are believed to be the fundamental skills to prepare readiness in competing and engaging with this current era.

### **2.2.6 2013 Curriculum**

The 2013 curriculum was firstly introduced in the 2013. In this curriculum, an innovation is brought in terms of curriculum ideas, designs, process, and implementation (Hasan, 2013). 2013 Curriculum is developed on competency-based curriculum. The content covers not limited to facts, concepts, theories, procedures, but also attitudes, thinking skills, social skills, and cultural skills.

In order to know students' achievement towards the competencies, assessments are created. According to Permendikbud no 23 year 2016, the assessment should be conducted by the educators, institution, and government. The assessment that is conducted by the educators covers the assessment on attitude, knowledge, and skill. In assessing attitude, it can be conducted through observation, self-assessment, and by students. In assessing knowledge, it can be conducted through written test, spoken test, or assignment. Lastly, in order to assess skills, it can be done by creating a product, project, or practicing skills. Therefore, in conducting assessment in regards to the 2013 curriculum, the assessment form can be designed based on the needs of the teaching-learning activity. In inserting HOTS in the textbook, BSNP (Badan Standar Nasional Pendidikan) required the development of life skills personally, socially, academically, and vocationally. In academic field, the skills of exploring and utilizing information, solving problem,

and making decisions are required to be instilled in every text, exercise and task in the textbook.

### **2.2.7 Reading Comprehension**

Reading comprehension is a process of understanding a text (Kirby, 2017). He further extended that reading comprehension is the application of skills that evolved for other purposes to a new input in the form of a text. Reading comprehension is defined as a process that is not limited to read the written text only, but also understand the meaning of the text.

Recently, reading comprehension is quite urgent to be activated. Nowadays, in doing reading activities, readers are not only demanded to read and understand a text, but also make meaning from the written text (Wahyuni, 2019). Furthermore, those abilities are substantial in wider field of life. Byers, John, and Kervin (2012) in Taylor (2018) mentioned that reading comprehension is crucial in all learning areas. The skill is needed in order to get the meaning from subjects that students learn. Not only limited in the educational field, reading comprehension skill is also vital in the wider field. Taylor (2018) stated that in this 21<sup>st</sup> century, the ability to grasp and be critical of the reading text will progressively be a vital competence. In order to effectively comprehend text both in the classroom and outside, the ability to engage with the text through critical thinking and problem solving are consecutively needed. Therefore, it comes to an agreement that reading comprehension skill is a required skill for everyone in this century and a basis skill to be cultivated for further skill of reading.

Realizing the importance of reading comprehension, it is essential to know the levels of comprehension in the expectation to have the comprehension ability in all levels. Center for Canadian Language Benchmark (2015) classified the level of comprehension into three:

#### 1) Literal

Literal comprehension necessitates the competence to comprehend specific information. It can be in the form of comprehending main ideas, factual details, or stated point of views. Day and Park (2005) based on Pearson and Johnson (1972) and Nutall (1996) mentioned that this level of comprehension requires learners to grasp straightforward meaning on a text. He gives the example by mentioning certain information regarding facts, vocabulary, dates, times, and locations. Based on those explanation, literal comprehension is an ability to grasp meaning that is already stated in the text. Those comprehension can be translated into questions like, “who....., where....., when....., what..?”

#### 2) Interpretive

Interpretive comprehension is a level of comprehension which emphasizes the ability of combining information and making inferences. In this level, the comprehension is made by making connection between ideas, being aware of the relationship between ideas, and finding unfamiliar ideas or unstated ideas on the texts. This can be in the form of identifying implied meanings, purpose of text, writer’s attitude, interpreting sequence and location, getting the gist of text, distinguishing fact and opinion, comparing information, summarizing, and other related tasks.



### 3) Applied

Applied comprehension means constructing knowledge from the information obtained. This can be in the form of asking students to build new ideas based on the given information or stating opinion based on the prior context. Questions exploring this ability may start with key words like “predict, imagine, what is your opinion, what do you think, what are some possible consequences, explain/defend...”

Since reading comprehension skill is fundamental nowadays, it is important to assure students’ proficiency in this skill in hope they are able to make meanings from what they have read. The comprehension itself is varied based on its level which each of them demands different cognitive level of comprehension. In order to be an effective reader, being able to comprehend text in those three levels is necessary. Hence, learners are expected to be able to go further and deeper in comprehending the text they read.

#### **2.2.8 Reading comprehension questions**

Day and Park (2005) stated that in order to assist students to construct meaning from a reading text, comprehension questions are designed. In this term, we assume that reading comprehension question is a question formed to enable students to gain comprehension or understanding from the reading text. It is also added that the questions is proposed to rise students’ engagement towards the text. This awareness is important to stimulate critical thinking, especially in reading activity.

In accordance with critical thinking ability, it is further explained by Muayanah (2014) that reading comprehension questions could stimulate the

progression of cognitive level in reading comprehension process. The progression from one level to another level might happen through various well-planned questions representing different level of task in getting into the reading text. Therefore, comprehension questions yield many advantages in comprehending reading text. Through comprehension questions, pupils have more opportunity to engage with the text well, develop the reading comprehension performance, rise the ability of critical thinking, and also develop the cognitive level while reading.

In reading comprehension questions, there are several question forms that can be devised. Day and Park (2005) mentioned the forms of the question as follows:

1) Yes/no questions

Yes/no questions are the most common questions given which simply require yes/no answer. This aimed at ensuring the learners' comprehension towards text through the process of determining whether certain points are correct based on the text. These types of questions ask students to show their agreement or disagreement towards certain issues mentioned in the text (Muayanah, 2014). When these questions are presented, several follow-up questions are needed in order to encourage students to comprehend more to the gist of the text.

2) Alternative questions

Alternative questions are similar with yes/no questions which mostly connected with the word 'or'. Hamzah (2011) explained "An alternative question is a type of question that offers two or more alternative responses from which one answer should be selected." When students are given these questions, they are asked to

choose one over two alternatives given. They are intentionally created in order to give a follow-up questions to form a further discussion.

### 3) True or false

True false questions are used to know how far learners understand the text by asking them to determine whether certain statement is true or false based on the reading text/passage. True/false questions ask students to directly give attention to the points constructed by means of true/false. In order to know the learners' understanding, true false statement must be carefully designed.

### 4) Wh- questions

Wh- questions focus on devising “what, where, when, why, who, and how” to form a question. This type of question mostly use as a follow-up questions of yes/no questions. This form of questions demand students to comprehend the text in more complex way since they are doing the process of reorganizing information, doing evaluation, or constructing personal answer based on the information on the text. In this type, the question of how/why is very helpful to rise a comprehension beyond literal meanings and to become interactive reader.

### 5) Multiple choice

Multiple choice is a familiar type of questions since it is used in many reading tests. This form of question provides answer choices following question. They can also employ skills to predict or evaluate. As multiple choice provides students with choices, they must be carefully designed which make one choice as the desired answer, but the other choices seem to be plausible options.

Those elaborations lead us to the core point of reading comprehension questions. They are questions to gain comprehension or understanding from a given passage or text. As text consists of various information, several question types can be employed to gain a complete comprehension. That is so because each type of question demands students to answer or mention different information from the text or passage. Thus, it is expected that reading comprehension questions could be the way of obtaining comprehensive information from the text covering detail information stated in the text to the information impliedly stated there.

### **2.2.9 Content Analysis**

Content analysis “is a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use (Krippendorff, 2004, p. 18).” Another definition comes from Cole (1988) in Elo & Kyngas, (2007) stating that content analysis is a matter of analyzing written, verbal or communication messages. It is explained that means of communication analyzed ranging from hymns, newspaper and magazine, articles, advertisements and political speeches (Harwood & Garry, 2003 in Elo & Kyngas, 2007). As text can be read from various perspectives, data can be subordinated into various analyses (Krippendorff, 2004, 22). Hence, content analysis can be said as an action of analyzing documents (Elo & Kyngas, 2007) from various categories or perspectives of a data.

In order to conduct a content analysis, Krippendorff (2004, p. 29) explained a framework to use, such as:

- (1) a body of text, the data that are available to be analyzed
- (2) research question, what the content analyst seek the answer in the body of the text
- (3) a context, certain environment that the analyst chose
- (4) an analytical construct, what the analyst knows about the context
- (5) inferences, the basic accomplishment of the intended questions
- (6) validating evidence, the ultimate justification of the content analysis.

Based on the above deliberation, body of text should be the first thing chosen as it is the source of data aimed to be analyzed. Meanwhile, research question is believed as a tool to specify the inferences intended to be drawn from the text. In accordance with the framework, this present research uses textbook as the object of study. The body of text or data aimed to be analyzed are part of units in the textbook.

Textbook comprises many parts of units that have different functions for each. Hence, there are many ways of analysis to choose depending on the aim of the research. In analyzing textbook, there are two approaches brought by Cunningsworth (1995, p. 2). Those two approaches are: impressionistic evaluation and in-depth evaluation. Impressionistic evaluation is mostly conducted before doing more specified analysis. It deals with physical aspect of textbook. While in-depth evaluation deals with content of textbook. It investigated certain items represented in textbook or how certain item is relevant with a standard. Those approaches mainly focus on analyzing textbook from different perspectives. In

order to know the representation of HOTS in reading comprehension questions, in-depth evaluation is carried out.

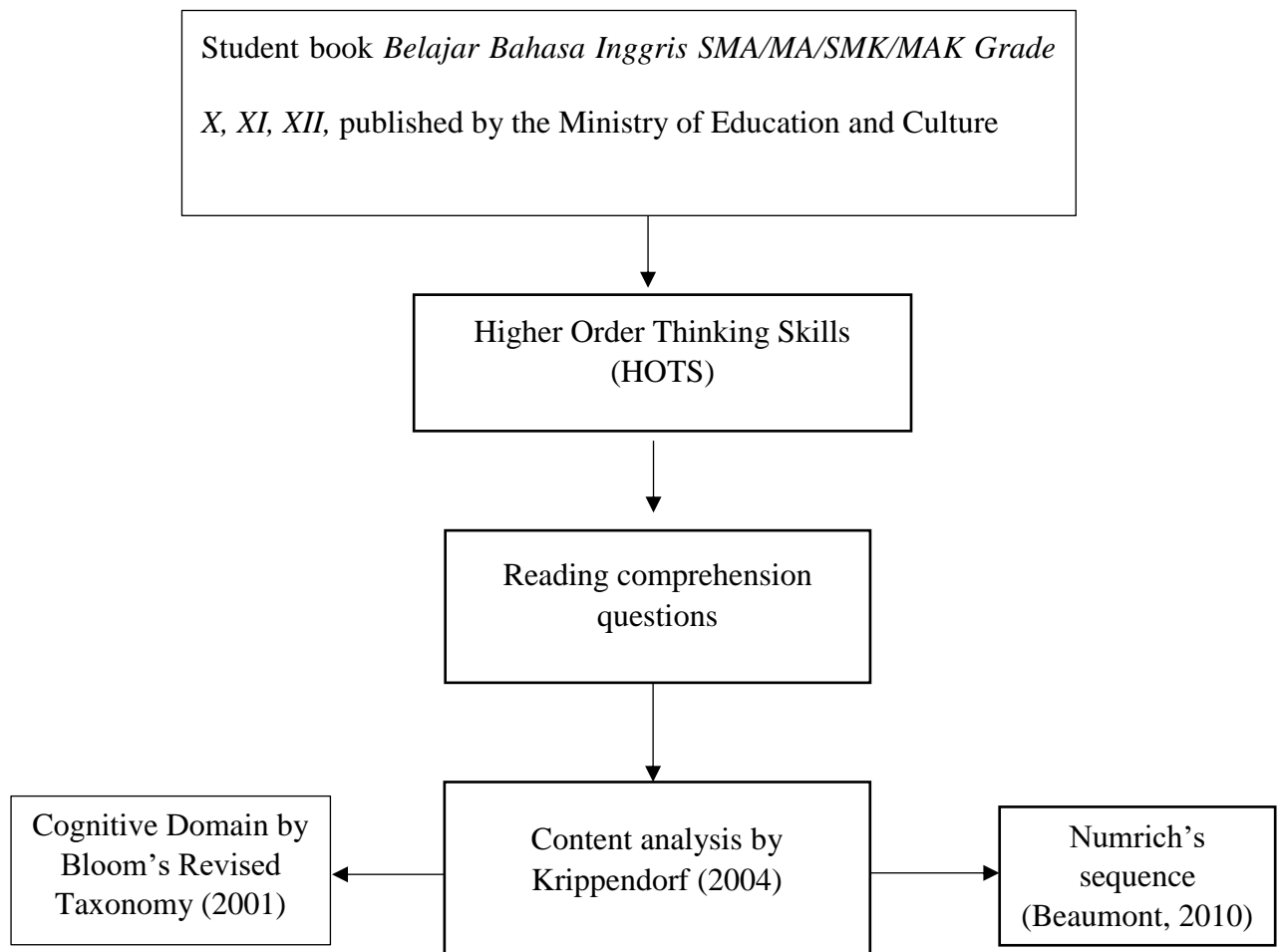
The conclusion of the elaboration is that content analysis is inferring messages from a body of text. The inferences are created based on the intended purpose through certain parameter. Since the text types are various, textbook can be one of the parts. In conducting content analysis on textbook, there are approaches and units that can be chosen depending on the aim of the research. This present research mainly focuses on carrying out a content analysis on textbook to describe HOTS realization in reading comprehension questions using Bloom's revised taxonomy and Numrich's sequence.

### **2.3 Theoretical Framework**

The previous discussion pertaining to related studies and theoretical review lead to the research that is conducted. The present research investigates English textbooks published by the Ministry of Education and Culture for grade ten, eleven, and twelve. It focuses on the reading texts and the comprehending question items found in those textbooks. The analysis is based on the cognitive level of Bloom's Revised Taxonomy (2001) and critical thinking task types of Numrich's sequence (Beaumont, 2010). The design is as follows:

- a) Textbooks that are designed by the Ministry of Education and Culture are the manifestation of the current curriculum standards. The 2013 curriculum which emphasizes HOTS translates its design in the form of materials and activities which are provided in the textbooks.

- b) In achieving HOTS competencies in reading skill, HOTS are the skills that should be developed in the reading comprehension questions of the textbooks.
- c) Bloom's Revised Taxonomy and Numrich's sequence are the frameworks that can be used to design and assess HOTS in reading comprehension questions.
- d) Assessing the representation of HOTS in reading comprehension questions in the textbooks belongs to content analysis.



**Figure 2.2.** Theoretical framework

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

This chapter contains several aspects of research methodology, such as, the research approach, object of the study, roles of the researcher, type of data, procedures of data collection, procedures of data analysis, and triangulation.

#### **3.1 Research Approach**

This research is a descriptive qualitative research using content analysis method which examines the realization of Higher Order Thinking Skills (HOTS) in reading comprehension questions found in the textbooks entitled "Bahasa Inggris SMA/MA/SMK/MAK published by the Ministry of Education and Culture for grade X, XI, and XII". Descriptive analysis chosen as the end of this research describes the observed phenomenon. The analysis is based on Bloom's Revised Taxonomy (2001) and Numrich's sequence in Beaumont (2010) to see the realization of HOTS. The analysis out of the mentioned topic will not be provided in this research.

#### **3.2 Object of the Study**

The object of this study was reading comprehension questions in the Student's Book Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017 published by the Ministry of Education and Culture. The examined question items are the questions following passages or texts.



### **3.3 Unit of analysis**

The data are reading comprehension questions found in the textbooks entitled “Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017” published by the Ministry of Education and Culture. From the three textbooks, the analysis is conducted on the reading comprehension questions found in 13 out of 15 chapters in textbook grade X, 7 out of 8 chapters in textbook grade XI, and 10 out of 16 chapters in textbook grade XII.

### **3.4 Type of Data**

The data of this research were taken from the Student’s Book Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017. Since the data is in the sort of document, then the data of this present research can be categorized into qualitative data.

### **3.5 Instrument of the research**

Two instruments are used in this research. They are:

#### **1. Cognitive level of Bloom’s revised taxonomy (2001)**

Cognitive level of Bloom’s revised taxonomy comprises six major categories, namely, remembering, understanding, applying, analyzing, evaluating, and creating. The reading comprehension questions which are under analysis are qualified to HOTS, if the questions fulfill the parameter of:

- a. Analyzing is defined as the skill to break materials into constituent parts and determine how they relate one another (Anderson & Krathwohl, 2001, p. 79).

In analyzing, there are three main processes, such as, differentiating, organizing, and attributing. In order to identify the questions belong to this category, several verbs can be used:

Advertise, Analyze, Appraise, Attribute, Assume, Categorize, Compare, Contrast, Classify, Conclude, Differentiate, Distinguish, Discover, Dissect, Divide, Examine, Function, Identify, Infer, Investigate, Infer, Inspect, List, Motive, Organize, Outline, Separate, Simplify, Survey, Test, Take part in (Tangsakul, 2017, p. 39).

- b. Evaluating is seen as a skill to make judgement based on certain criteria or parameter (Anderson & Krathwohl, 2001, p. 83). There are two main processes in evaluating. They are checking and critiquing. Several sample verbs can be used to identify this category which is included in the reading comprehension questions. Below are the sample verbs:

Debate, Decide, Defend, Deduct, Determine, Disprove, Determine, Dispute, Editorialize, Estimate, Evaluate, Importance, Influence, Interpret, Judge, Justify, Mark, Measure, Prioritize, Perceive, Prove, Rate, Recommend, Select, Support, Verify (Tangsakul, 2017, p.40).

- c. Creating is viewed as a skill to put elements together to form a coherent functional whole (Anderson & Krathwohl, 2001, p. 84). This can be encouraged through the process of hypothesizing, designing, and constructing.

The sample verbs instructing this skill can be found in the following examples:

Adapt, Build, Change, Combine, Compare, Compose, Construct, Create, Choose, Compile, Design, Develop, Discuss, Delete, Design, Devise, Elaborate, Estimate, Formulate, Generate, Hypothesize, Happen, Imagine, Improve, Invent, Make up, Maximize, Minimize, Modify, Original, Originate, Plan, Predict, Propose, Solve, Suppose, Test (Tangsakul, 2017, p. 40).

## 2. Task types of Numrich's sequence (Barmont, 2010)

Task types of Numrich's sequence (Beaumont, 2010) contains seven major tasks namely observing, identifying assumptions, understanding and organizing, interpreting, inquiring further, analyzing and evaluating, and making decisions.

Reading comprehension questions can be categorized into HOTS-based questions if they fulfill the criteria of:

### a. Inquiring further

Inquiring further mainly focus on the activity of surveying public, interviewing specialists, and researching (Beaumont, 2010).

### b. Analyzing and evaluating

Analyzing and evaluating focuses on the skills of synthesizing information, critiquing, reflecting on related ideas, making logical conclusion, and reevaluating assumptions (Beaumont, 2010).

### c. Making decisions

Making decision emphasizes the skills of proposing solutions, problem solving, taking action, and participating.

## 3.6 Roles of researcher

In this study, the researcher had three roles as follows:

### 1) The Data collector

The researcher collected the reading comprehension questions in Student's Book Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017.

## 2) The Data Analyst

The researcher analyzed the reading comprehension questions viewed from Higher-Order Thinking Skills using Bloom's revised Taxonomy (2001) and Numrich's sequence (Beaumont, 2010).

## 3) The Data Reporter

The researcher reported the findings of this study in chapter four.

### **3.8 Procedure of data collection**

The data of this research were taken from the Student's Book BAHASA INGGRIS SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017 which were then collected through the following procedures: (1) reading the textbooks Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, XII Edisi Revisi 2017 (2) collecting the reading comprehension questions from the textbooks and (3) doing documentation.

### **3.9 Procedure of Data Analysis**

According to Miles and Huberman (1994, p.10) there are three steps in analyzing qualitative data:

- 1) Data reduction is the process of organizing data by focusing, simplifying, abstracting, and transforming the raw data which enables conclusion drawing;
- 2) Data display is the process of making an organized and compressed assembly of information for conclusion drawing or further action. The display can be in the form of matrices, graphs, charts, and networks; and

3) Conclusion and verification which is a process of generating conclusion from the displayed data and verifying the conclusion. The conclusion is derived by noting regularities, patterns, explanations, possible configurations, causal flows, and propositions. In order to obtain a final conclusion, conclusion verification is conducted.

In regards to the above explanation, the researcher did the following processes in each step:

First, during the data reduction stage, the researcher organized the collected data by sorting the relevant reading comprehension questions from the textbooks and eliminating the irrelevant questions. Afterwards, the reading comprehension questions were classified based on the grade of the book. Therefore, the reading comprehension questions in the textbook grade X were classified into one, so did the reading comprehension questions in textbooks grade XI and XII. This aimed at assisting the researcher to identify the data. Table 3.1 showed an example of data reduction result.

**Table 3.1** List of reading comprehension questions

No	Questions	Grade of the book

In the stage of data display, the researcher displayed the reduced data in the form of checklist table to be analyzed by identifying and categorizing the data. In order to identify and categorize the data, the researcher used checklist 1 to identify

and categorize the reading comprehension questions according to the cognitive level of Bloom's revised taxonomy (2001) and checklist 2 to identify and categorize the reading comprehension questions according to the task types of Numrich's sequence (Beaumont, 2010). Referring to the qualification of HOTS categories, in identifying and categorizing, the researcher marked (v) to the column that the question was qualified to, and let the column () if it was not qualified to. Afterwards, the result of each textbook was displayed in a form of table and narration containing the information regarding the realization of each cognitive level of Bloom's revised taxonomy (2001) and task types of Numrich's sequence in Beaumont (2010). This enabled the researcher to assess the information pertaining to the realization of HOTS in reading comprehension questions. After that, the results were compared to the 2013 curriculum in order to know how the realization of HOTS in accordance with 2013 curriculum. In conducting this, the researcher referred to the BSNP in terms of HOTS realization. The result on presenting the comparison on the results and 2013 curriculum was presented in a form of narration. Table 3.2 is an example of analysis result display based on cognitive level of Bloom's revised taxonomy of each textbook.

**Table 3.2** The analysis result of cognitive level Bloom's revised taxonomy

No	Chapter	Remember	Understand	Apply	Analyze	Evaluate	Create
1							
2							
<b>Total</b>							
<b>Percentage</b>							

Table 3.3 is an example of analysis result display based on Numrich's sequence analysis of each textbook.

**Table 3.3** The analysis result of Numrich's sequence

No	Chapter	Obs	IA	U&O	INT	IF	A&E	MD
1								
2								
<b>Total</b>								
<b>Percentage</b>								

OBS : Observing

IF : Inquiring further

IA : Identifying assumptions

A&E : Analyzing and evaluating

U&O : Understanding and organizing MD: Making decision

INT : Interpreting

Lastly, in the stage of conclusion drawing and verification, the researcher interpreted the result of the analysis and derived conclusion based on the research questions. In this stream, the researcher concluded the analyzed data in the form of narration supported by tables in order to explore the realization of each cognitive level of Bloom's revised taxonomy in the reading comprehension questions, the realization of HOTS in the reading comprehension questions, the realization of HOTS viewed from Numrich's sequence in the reading comprehension questions, and the relevance towards the 2013 curriculum. In this stage also, the result was triangulated to confirm the analysis result to finally present a final conclusion of the research. Table 3.4 is an example of summary of analysis result based on cognitive level of Bloom's revised taxonomy (2001) and table 3.5 is an example of summary of the analysis result according to Numrich's sequence from three textbooks. The tables contain the information regarding the realization of cognitive level of Bloom's revised taxonomy and Numrich's sequence. These information is necessary to make interpretation and conclusion which relate to the research

questions. Table 3.4 contains an example of summary of analysis result based on cognitive level of Bloom's revised taxonomy (2001) from three textbooks.

**Table 3.4** Summary of the analysis results of Bloom's revised taxonomy

No	Cognitive level	Frequency on each Grade of the book					
		X	%	XI	%	XII	%
1	Remember						
2	Understand						
3	Apply						
Higher order thinking skills							
4	Analyze						
5	Evaluate						
6	Create						

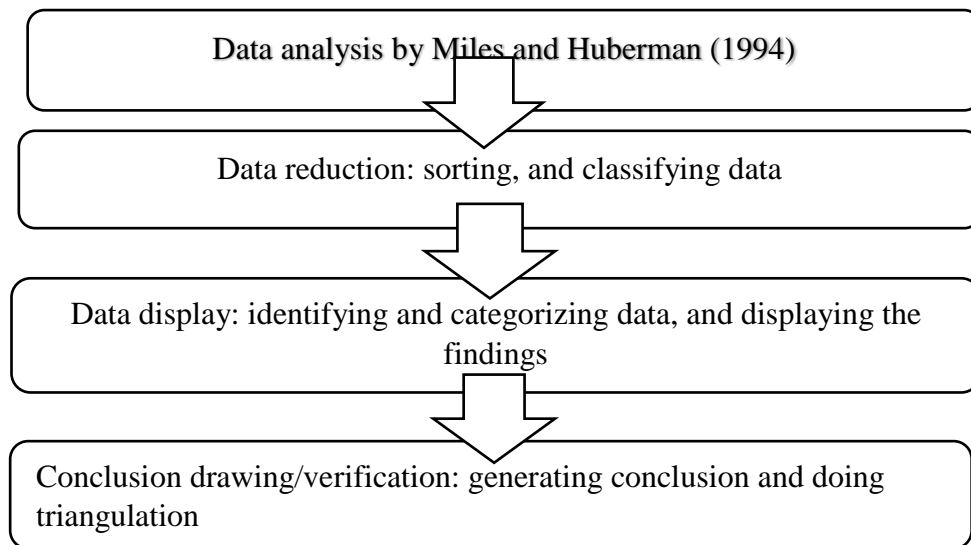
Table 3.5 presents an example of summary of analysis result based on Numrich's sequence from three textbooks.

**Table 3.5** Summary of analysis result on Numrich's sequence

No	Perspective	Cognitive level	Frequency on each Grade of the book					
			X	%	XI	%	XII	%
1	Focus on students' world	Observing						
		Identifying assumptions						
2	Focus on the text	Understanding and organizing						
		Interpreting						
3	Focus beyond the text	Inquiring further						
		Analyze and evaluate						
		Making decision						



In summary, the data analysis processes in this present research are as follows:



**Figure 3.1** Data analysis process

### 3.10 Triangulation

Triangulation is supposed to do to confirm conclusion or finding. It is conducted by showing that other independent measures support the findings or at least don't contradict (Miles & Huberman, 1994, p. 266). In triangulating, Denzin's (2001) in Miles and Huberman (1994, p. 266) stated that there are several ways can be selected: triangulation by data source (which can include persons, times, places, etc), by method (observation, interview document), by researcher (investigator A, B, etc), by theory (using one or more theory related to the research to confirm the findings).

In this present research, triangulation by data source was chosen to know how teachers, as the users of the books, viewed the realization of HOTS in reading comprehension questions. Questionnaires were distributed to an English teacher of

senior high school (Heru Purwanto, S.Pd., M.Pd., B.I) and vocational high school English teacher (Kusumandari, M.Pd) in Purworejo. Both of the teachers use the textbooks in their teaching and learning activity. In doing triangulation, the researcher also adopted theoretical triangulation by confirming the result of the analysis to the reviewed previous studies

## **CHAPTER IV**

### **FINDINGS AND DISCUSSION**

This chapter presents the findings of HOTS analysis on reading comprehension questions found in the textbooks *Bahasa Inggris SMA/MA/SMK/MAK kelas X, XI, and XII* based on Bloom's revised taxonomy (2001) and critical thinking task types of Numrich's sequence (Beaumont, 2010). The findings are presented in tables, narration, and also several examples. There are four main presentations of the findings: (1) the realization of HOTS in reading comprehension questions found in the textbook for grade X; (2) the realization of HOTS in reading comprehension questions found in the textbook for grade XI; (3) the realization of HOTS in reading comprehension questions found in the textbook for grade XII; (4) the realization of HOTS viewed from task types of Numrich's sequence in reading comprehension questions found in the textbooks for grade X, XI, and XII; and (5) the realization of HOTS in reading comprehension questions in the textbooks in comparison to the 2013 curriculum. The detail explanation and examples are added in each part. The finding regarding the questionnaire result of triangulation is also added. The last part is the discussion of the findings.

#### **4.1 Findings**

The findings are organized based on the formulation of the research questions. There are five main questions that are meant to be answered. In order to present the answer, the investigation of the reading comprehension questions based on

cognitive level of Bloom's revised taxonomy (2001) and task types of Numrich's sequence (Beaumont, 2010) is conducted.

Bloom's revised taxonomy (2001) is created with the aim of assisting teachers in translating curriculum standards into more specific objective to achieve. It is expected that the taxonomy guides teachers in making curriculum decision (Krathwohl & Anderson, 2001, p.7). There are two dimensions in the Bloom's revised taxonomy: cognitive process and knowledge. The cognitive level contains six categories: remembering, understanding, applying, analyzing, evaluating, and creating. Those categories are assumed to have different cognitive complexity where the higher levels have higher complexity. The first three categories are called Lower Order Thinking Skills (LOTS) and the three higher level are called Higher Order Thinking Skills (HOTS). In current days, HOTS are shouted to be implemented in many educational objectives. Therefore, in order to see the realization of HOTS, the reading comprehension questions found in English textbooks are analyzed using the cognitive level.

Based on the cognitive level analysis, the result of the analysis for each textbook is presented in table 4.1, 4.2, and 4.3.

**Table 4.1** Analysis result of reading comprehension questions found in the textbook for grade X based on cognitive level of Bloom's revised taxonomy

No	Chapter	Remember	Understand	Apply	Analyze	Evaluate	Create
1	1	18	0	0	0	0	0
2	2	8	4	0	0	0	0
3	3	3	3	0	0	0	0
4	4	13	4	0	6	4	0
5	5	10	0	0	0	0	0
6	6	13	2	0	0	0	0
7	8	9	1	0	1	2	0
8	9	5	3	0	1	3	1

No	Chapter	Remember	Understand	Apply	Analyze	Evaluate	Create
9	10	12	0	0	0	0	0
10	11	15	0	0	0	0	1
11	13	9	0	0	0	0	1
12	14	9	0	0	0	1	0
13	15	1	5	0	1	1	0
<b>Total</b>		<b>125</b>	<b>22</b>	<b>0</b>	<b>9</b>	<b>11</b>	<b>3</b>
<b>Percentage</b>		<b>73.52%</b>	<b>12.94%</b>	<b>0%</b>	<b>5.29%</b>	<b>6.47%</b>	<b>1.76%</b>

In the textbook for grade X, it is found that the majority of the reading comprehension questions emphasize LOTS more than HOTS. This is shown by the result that the majority of the questions are categorized into LOTS than HOTS. From the table, it can be inferred that more than 86% of the questions are in LOTS level which is distributed into remembering 73.52% or 125 unit questions followed by understanding 12.94% or 22 unit questions. All higher level thinking skills are covered in the textbooks although not as many as lower level thinking skills. In sum, there is only 13.52% of HOTS-based questions or 23 questions out of 170 questions. In realizing HOTS, the most employed category is evaluating with 11 questions followed by analyzing with 9 questions. However, the highest category of cognitive level, which is creating, becomes the least dominant skill with only 3 unit questions from the overall 170 questions.

Those percentages are quite different from the percentages found in the textbook for grade XI. Table 4.2 shows detail representation of cognitive level in each of the chapters.

**Table 4.2** Analysis result of reading comprehension questions found in the textbook for grade XI based on cognitive level of Bloom's revised taxonomy

No	Chapter	Remember	Understand	Apply	Analyze	Evaluate	Create
1	1	0	0	0	2	0	0
2	2	1	1	0	1	1	0
3	3	1	0	0	1	1	0
4	4	2	0	0	1	0	0
5	6	0	1	0	0	2	0
6	7	2	6	0	4	8	3
7	8	2	0	0	2	0	0
<b>Total</b>		<b>8</b>	<b>8</b>	<b>0</b>	<b>11</b>	<b>12</b>	<b>3</b>
<b>Percentage</b>		<b>19%</b>	<b>19%</b>	<b>0%</b>	<b>26.19%</b>	<b>28.57%</b>	<b>7.14%</b>

Quite different from textbook for grade X, reading comprehension questions in the textbook for grade XI employ more HOTS-based questions compared to LOTS-based questions. There are 26 out of 42 questions are HOTS-based questions. It is proven that most of the questions are in the evaluating category with 12 question items followed by analyzing category with 11 question items. However, creating is still the least category employed with only 3 unit questions.

Those results are quite different from the textbook grade XII. Table 4.3 shows the result.

**Table 4.3** Analysis result of reading comprehension questions found in the textbook for grade XII based on cognitive level of Bloom's revised taxonomy

No	Chapter	Remember	Understand	Apply	Analyze	Evaluate	Create
1	4	0	5	0	0	0	0
2	5	8	4	0	2	0	0
3	6	8	1	0	1	0	0
4	7	9	1	0	0	0	0
5	8	5	4	0	5	2	0
6	10	16	1	0	0	0	0
7	11	11	2	0	1	3	1
8	12	6	2	0	0	0	2
9	13	4	4	0	0	1	0
10	15	5	1	1	1	0	0
<b>Total</b>		<b>72</b>	<b>25</b>	<b>1</b>	<b>10</b>	<b>6</b>	<b>3</b>
<b>Percentage</b>		<b>61.53%</b>	<b>21.36%</b>	<b>0.85%</b>	<b>8.54%</b>	<b>5.12%</b>	<b>2.56%</b>

Lastly, in the textbook for grade XII, LOTS are more emphasized than HOTS. Only 16.22% of the questions or 19 out of 117 questions are qualified to HOTS, while the other questions are categorized into LOTS with 83.74% or 98 questions. From the analysis result, it can be inferred that in this textbook, the categories are more varied since the questions cover all of the cognitive levels; remembering, understanding, applying, analyzing, evaluating, and creating. However, the realization of HOTS are still low. The recap of the analysis results from the three textbooks can be checked in the Table 4.4.

**Table 4.4** Summary of analysis result based on cognitive level of Bloom's revised taxonomy (2001)

No	Cognitive level	Frequency on each Grade of the book					
		X	%	XI	%	XII	%
1	Remember	125	73.52%	8	19%	72	61.53%
2	Understand	22	12.94%	8	19%	25	21.36%
3	Apply	0	0	0	0	1	0.85%
Higher order thinking skills							
4	Analyze	9	5.29%	11	26.19%	10	8.54%
5	Evaluate	11	6.47%	12	28.57%	6	5.12%
6	Create	3	1.76%	3	7.14%	3	2.54%

Noting the percentages shown in Table 4.4, there are three points that can be inferred: (1) in the textbooks for grade X and XII, the reading comprehension questions touch LOTS deeper than HOTS. In the textbooks for grade X and XII, remembering category dominates the questions. On the other hand, in textbook grade XI, evaluating category taps the questions; (2) in realizing HOTS, evaluating is more highlighted than analyzing and creating in the textbook for grade X. Similarly, in the textbook for grade XI, evaluating is also more spotted than

analyzing and creating. On the other hand, in textbook grade XII, analyzing is more emphasized than evaluating and creating. However, from three textbooks, creating, which is the highest category of cognitive level, becomes the least category with only 3 questions which appear in each of the textbooks. In accordance with the realization of HOTS, the three textbooks realized HOTS in different ways. Thus, to see the realization of HOTS in each textbook, the following explanations display the results.

#### **4.1.1 The realization of HOTS in reading comprehension questions found in the textbook for grade X**

Referring to the result of the cognitive level analysis, it is shown the information pertaining to the realization of the six categories on the reading comprehension questions found in the textbooks for grade X, XI, and XII. The number of questions found in each category leads to the information regarding the realization of HOTS which becomes the main question to answer in this present research.

In the textbook for grade X, the majority of the reading comprehension questions are categorized into lower thinking skills. Higher thinking skills are weakly touched. HOTS-based questions are only found in 13.52% of the questions which is way lower than LOTS. Thus, in terms of the realization of HOTS, it is found that HOTS are realized in less sufficient portion.

The HOTS-based questions are distributed into three categories namely, analyzing, evaluating, and creating. There are 9 questions belong to analyzing, 11 questions belong to evaluating, and 3 questions belong to creating. Noting those percentages, evaluating is the highest category found which is followed by



analyzing and creating. Creating as the highest category of cognitive level only receives 1.76% of the questions which becomes the least frequent category compared to analyzing and evaluating. These categories are further elaborated in the sub sub-chapter 4.1.1.1, 4.1.1.2, and 4.1.1.3.

#### 4.1.1.1 Analyzing

Analyzing is defined as a process of breaking material into its constituent parts and determining how they relate one another (Anderson & Krathwohl, 2001, p.79). In analyzing, there are three main cognitive processes, namely, differentiating, organizing, and attributing. There are 5.29% of the questions in the textbook for grade X which are qualified into this category. Several sample questions of this category can be seen in Table 4.5.

**Table 4.5** Sample questions of analyzing category

Sample questions	Chapter
Read the text 1 again. Find out the similarities between text 1 and text 2	4
What is the author's purpose in writing the essay?	4
What is the writer's opinion about the meet-and-greet event?	8

The first sample question is '*Read the text 1 again. Find out the similarities between text 1 and text 2*'. In order to answer the question, students cannot find the similarities by simply seeing the physical side of the paragraph, instead, they have to analyze the content of two paragraphs to differentiate them. Students need to read the paragraphs carefully and distinguish what information that is presented and how

the information is structured in each paragraph. By conducting this, students may see how each paragraph is different one another.

The question '*What is the author's purpose in writing this essay?*' wants students to determine writer's intention in writing the essay. To bring the answer for the question, students need to analyze the content of the text, the details that are explained in the text, and the tone how the information is presented in the passage. In that question, students are previously given a text about Tanjung Putting Nasional Park. In order for students to present answer, students need to read the passage carefully to seek out what the passage is about. Having found the gist of the passage, students need to know the writer's main concern in the text whether the writer is describing Tanjung Putting Nasional Park in general, persuading reader to visit the place, or other concerns. By conducting those steps, students may come up with the main information of the text and what main concern that is shown in the text. Those steps enable students to finally discover the writer's purpose in writing the text.

For the last question asking about the writer's opinion, students need to find out how the writer's opinion is pertaining to the meet-and-greet event that he/she tells in the text. To know the writer's opinion, students need to firstly understand the text and the main story that the writer tells. From this, students are able to know and then analyze the impression from the event that the writer experienced. Then, students need to analyze how the tone of each sentence is and what words that are chosen in delivering the story. This enables students to see how the writer thinks of

his/her experience. By connecting these elements, students are able to finally draw how the writer's opinion is in the text regarding the event.

#### **4.1.1.2 Evaluating**

Evaluating involves an action of making judgment based on certain criteria or standards. The criteria can be in the form of quality, effectiveness, efficacy, or consistency which are determined by students or others (Anderson & Krathwohl, 2001, p.83). What makes this different from giving opinion or point of view is the existence of the criteria or standards. There are 6.47% of the reading comprehension questions from the textbook for grade X which belong to this category. Table 4.6 comprises the sample questions of evaluating category.

**Table 4.6** Sample questions of evaluating category

<b>Sample questions</b>	<b>Chapter</b>
Do you think that the information in the text is clear?	9
Is there something in the text that is not relevant to your life? Why?	8
What do you think about the Indonesian military power compared to that of the British army at that time?	9

In order to answer the first question, students need to firstly understand what must be judged or criticized. Having understood, they then move to give an evaluative judgement based on the given criteria. From the sample question, students firstly need to observe thoroughly and evaluate how the information in the text is organized. Afterwards, students need to translate the parameter that is set, for instance, how parameter of clear is. Having dealt with those parts, the judgement whether the information is justified to be said clear or not is possible to be made.

In the second question, students need to check whether the value or the information presented in the text has relevancy to the students' life or not. First, students need to observe the information in text. Afterwards, they need to see how their lives and their surroundings are. Having been observed, students then move to see those two things together and detect the relevancy of those parts. Last but not the least, students need to give reasons why then they come to say that the information is relevant or irrelevant to their lives.

Lastly, in order to answer the third question, students need to give judgement on the Indonesian army in the comparison to the British army. In that passage, it is elaborated how both army fought bravely. Those elaborations lead students to note the features of each army. From this, students are able to finally find out the basis to set a judgement.

#### **4.1.1.3 Creating**

Creating emphasizes the action of putting elements together to form a coherent or functional whole. It can be conducted by making a new product or mentally reorganizing some elements that are not clearly presented before (Anderson & Krathwohl, 2001, p. 84). As the highest category of cognitive level, there are only a few creating-based questions found in the textbooks. In the textbook for grade X, there are only 3 unit of questions employing this cognitive level or 1.76% of the questions. In order to know how this category is realized, Table 4.7 represents the sample questions.

**Table 4.7** Sample questions of creating category

<b>Sample questions</b>	<b>Chapter</b>
Indonesia has gone through many battles. Why do you think the date of the battle of Surabaya is used as a momentum to commemorate our hero's contributions?	9
Had you lived close to Cut Nyak Dien, what would you have done to support her efforts in fighting against the Dutch colonization?	11
What is the moral of the story?	13

To deal with the first question concerning commemorating hero's contribution, students are demanded to generate hypotheses based on the given criteria. Here, students need to hypothesize why the date of battle of Surabaya became a momentum in commemorating hero's contribution. It can be met by closely look at the story of Battle of Surabaya. By observing the story told there, students can assess what was happening at the battle and then generate their own premise regarding why the date is used to commemorate hero's contribution which is beyond what is written in the text. This hypothesis is not something that is interpreted from the text, but is generated based on students' own decision on making the hypothesis.

The second question requires students to produce a solutions on a given problem. In that question, students are brought back to the situation in the past, in time of fighting against Dutch colonializations. What students are expected to do is formulating an action to support Cut Nyak Dien in fighting against the Dutch

colonization. In order to accomplish this task, students need to know the context and the situation in that specific time. Finally students are asked to design and decide the right step to move.

Lastly, to answer the third question, students need to find out the moral value of a story. In the first step, students need to understand the core story. Knowing the core story, students then move to investigate what the characters do in the story and what they got in the end of the story. From this, students are expected to reflect story that is told and then generate what they learn from the story.

#### **4.1.2 The realization of HOTS in reading comprehension questions found in the textbook for grade XI**

Realizing the significance of HOTS, the reading comprehension questions found in the textbook for grade XI highlight HOTS-based questions. More than 60% of the total questions are categorized into HOTS. In detail, based on the analysis, it is discovered that there are 61.9% of the questions which are qualified to HOTS categories.

In conjunction to the percentages, it is found that HOTS are adequately realized. From these three categories, evaluating is the most categories found than analyzing and creating. However, creating, which is the highest category, is still the hardly found. It can only be found in 3 questions.

Since evaluating is the highest category found, students mostly deal with the process of making judgement, critiquing, or checking inconsistencies in a

passages. To see how the questions realize HOTS, the sub sub-chapters 4.1.2.1, 4.1.2.2, and 4.1.2.3 explain each category in detail.

#### **4.1.2.1 Analyzing**

This category is realized in great number of questions. It is realized in 11 out of 42 questions which is slightly different with evaluating category. The sample questions belong to this category are presented in table 4.8.

**Table 4.8** Sample questions of analyzing category

<b>Sample questions</b>	<b>Chapter</b>
What kind of invitation do you think in the excerpt given above? How can you say that?	3
What do you think is the theme of the song?	7
Do you think the poet is content with his choice? Give reasons to support your answer!	7

The first question demands students to break the elements of invitation to see the organization and analyze them in order to determine kind of invitation. In analyzing the elements, it is essential to recognize the specific purpose of the invitation and also the linguistic features. From these, students are required to determine kind of invitation.

The second question wants students to decide the theme of a song. This is categorized into analyzing since one of the aims of analyzing category is to develop the skill “to distinguish dominant from subordinate ideas or themes in poetry or music” (Anderson & Krathwohl, 2001, p. 80). In determining the theme, students

need to analyze each lyric of the song carefully and the main discussion in each lyric. By noting this subordinate ideas, it is possible for students to see the theme of the song.

Those are quite different with the third questions asking about the poet's feeling in the poem. Students need to find out whether the poet is content with his choice or not in a poem. Students need to analyze the content of the poem in order to discover the core story that is told. Then, students need to analyze how the tone of each sentence is and what words that are chosen in delivering the poem. These enable students to see how the poet feels and sees his choice that is instilled in the poem. By noting the tone of each line of the poem, this directs students to have a reasonable proof to answer the second question '*Give support to your answer*'. This process is called attributing, which mainly focuses on investigating writer's point of view, biases, value, or intention that is instilled in a text (Anderson & Krathwohl, 2001, p. 82).

#### **4.1.2.2 Evaluating**

This category becomes the category that students primarily work on. The 28.57% of the questions that belong to this category encourages HOTS through the process of judging, critiquing, or checking. The sample questions that realize this skill are exhibited in table 4.9.



**Table 4.9** Sample questions of evaluating category

Sample questions	Chapter
Do you think smoking is dangerous?	6
Do you consider stand by me as an inspirational song? Why?	7
Do you agree with what the poet is saying? Why? Or why not?	7

Those sample questions primarily foster the skill of evaluating an element to finally formulate a judgement. In order to answer those sample questions, students need to firstly understand what must be judged or criticized. Having understood, they then move to give an evaluative judgement based on the given criteria. From the sample questions, students firstly need to evaluate how smoking is, how song *stand by me* is, and how the poet's saying in the poem is. Afterwards, students need to translate the parameter that is set, for instance, how parameter of dangerous is, how inspirational is, and how something is agreed or not. They then move to judge whether smoking is dangerous or not considering the effects, whether the song is inspirational or not noting all the elements of the song, and why it is justified for students to agree or disagree toward what is said in the poem.

#### **4.1.2.3 Creating**

Creating emphasizes the action of putting elements together to form a coherent or functional whole. It can be conducted by making a new product or mentally reorganizing some elements that are not clearly presented before (Anderson & Krathwohl, 2001, p.84). As the highest category of cognitive level, there are only a few creating-based questions found in the textbook for grade XI. There are only 3

unit of questions employing this category. In order to know how this category is realized, Table 4.10 presents the sample questions.

**Table 4.10** Sample questions of creating category

Sample questions	Grade
If you had to change the lyrics of stand by me, which lyrics would you change?	7
Who is your hero?	7
What might the two roads represent or symbolize? Make a list of possibilities and discuss with your partner!	7

Those three questions demand students to employ the skill of creating. In the first question, students need to assess the lyrics and then determine which lyric that students would change if they had to. In this stream, students need to devise their ability to investigate and determine which lyric they perceive should be changed noting the coherent meaning in a whole song.

On the second question, students are required to determine their own hero based on certain specifications that have been explained. In this question, a song entitled *hero* is presented to students. From the song, students learn the story about hero and the ideal portrayal of a hero. After listening the song, students are asked to construct their own product by determining the person that students perceive to deserve to be labelled as a hero.

Lastly, the third question primarily encourages students to generate the meaning of a word in a poem. In this question, students should hypothesize what

the two roads in a poem may symbolize. By considering the context of the word in a poem, some possibilities of the meaning behind the two roads should be generated.

#### **4.1.3 The realization of HOTS in reading comprehension questions found in the textbook for grade XII**

In the realization of cognitive level in the reading comprehension questions found in the textbook for grade XII, it is revealed that HOTS are realized. However, the realization receive lesser attention in comparison to those of LOTS. This is proven by the realization of HOTS which are only found in 16.2% of the questions or 19 out of 117 questions, and the rests are found to be categorized into LOTS. This representation is obviously need more to be increased noting the importance of HOTS in current days.

Those higher thinking skills are manifested into the reading comprehension questions which pushes students to conduct a process of differentiating, organizing, judging, or formulating a solution of certain problems. To explore these realizations in more detail way, the sub sub-chapters of analyzing, evaluating, and creating provide the information.

##### **4.1.3.1 Analyzing**

Analyzing is the skill of breaking materials into constituent parts and recognize how each part relates one another and to the whole structure (Anderson & Krathwohl, 2001, p. 79). This category includes the process of differentiating, organizing, and attributing. In connection to those processes, there are 10 out of 117 questions which

are qualified into this category. Three from ten questions of this category are presented in table 4.11.

**Table 4.11** Sample questions of analyzing category

Sample questions	Chapter
What type of text is it?	5
What is being debated? What is the fact? Why do you think so?	5
What differentiate one type of bullying from another?	8

The first sample question wants students to ascertain type of text. To accomplish this task, students need to break the text and recognize the whole organization of the text. Students need to investigate the main topic of the text, the organization of information on each paragraph, and the linguistic features. These parts allow students to get the answer of the text type.

The second question requires students to distinguish facts on the discussion of a debate. This task becomes one of the main concerns on analyzing skill which is to enable students to distinguish fact from opinion (Anderson & Krathwohl, 2001, p. 79). In working on this task, students need to analyze how a topic is being debated. Afterwards, students need to investigate more detail arguments that are brought and find out how the arguments are built. From this arguments, students are asked to distinguish the facts by finding out the premises and also evidences. These assist students in detecting the one which is fact and which one is not.

Lastly, the third question focuses on the process of differentiating. In that question, students are demanded to differentiate one type of bullying from another. This can be done by noting how the characteristics of each type of bullying is. By

exploring this, students then move to present the differences of each type of bullying.

#### 4.1.3.2 Evaluating

Evaluating is defined as making judgement based on certain criteria that are imposed (Anderson & Krathwohl, 2001, p. 83). In connection with the definition, there are 6 questions out of 117 questions which are categorized into evaluating. The sample questions of this category are represented in table 4.12.

**Table 4.12** Sample questions of evaluating category

Sample questions	Chapter
Which do you think is the most damaging kind of bullying?	8
How serious was the violation? Why do you think so?	11
Are you in favor of Mr. Subagio's decision or against it? Why?	11

The first question asks students to give their judgements over kind of bullying. The judgement that should be given is under the parameter of the most damaging. In this context, students firstly read a text containing the information of bullying. It is explained the definition of bullying, kind of bullying, and also the effects of bullying. With those different kinds and characteristics of bullying, students are demanded to decide which one is the most damaging considering the effects of each kind of bullying. In doing this, students need to evaluate each kind of bullying and judge why certain kind of bullying meets the parameter of damaging. This goes the same for the second question. In the second question students should give their evaluative judgements of a violation under the parameter

of seriousness. It is expected that students give an evaluative judgement of how serious a violation is.

The third question leads students to give critics of an action. In this question, students are demanded to criticize Mr. Subagio's decision. It should be evaluated whether the decision is the right one to be taken amid the situation. From this, students are expected to share their judgement whether they agree or against it. This stance should be obviously followed by a reason.

#### **4.1.3.3 Creating**

As the highest category of cognitive level, creating mainly focuses on encouraging the skill of "Putting elements together to form a coherent or functional whole" (Anderson & Krathwohl, 2001, p.84). In this category, students formulate a construct by coordinating the previously learned experience. However, the construct is not explicitly mentioned before. Hence, students should design their own products in dealing with this category. There are 3 questions belong to this category which are shown in table 4.13.

**Table 4.13** Sample questions of creating category

<b>Sample questions</b>	<b>Grade</b>
In your opinion, what can prevent us from committing such a crime?	11
If you were one of the parents, what would you do to respond to some problems with the online system?	12
If you were Ahok, what would you do to respond to the parents' concern?	12

Those three questions mainly focus on addressing solutions toward some problems. In this task, students need to devise a solution which suits to the given problem. In order to accomplish the task, students need to assess the problems and then establish ways to make the problems solved. In this light, students need to create their own alternatives ways to prevent a crime, to solve the online system problem that parents face, and to respond parents' concern from the point of view of government. This is in line with a process of producing, where the focus is on solving a problem based on certain specifications (Anderson & Krathwohl, 2001, p. 87).

#### **4.1.4 The realization of HOTS viewed from task types of Numrich's sequence in reading comprehension questions found in the textbooks for grade X, XII, and XII**

In the task types of Numrich's sequence, there are three perspectives of critical thinking with seven task types. The three perspectives are: focus on students' world, focus on the text, and focus beyond the text. The seven task types are: observing, identifying assumptions, understanding and organizing, interpreting, inquiring further, analyzing and evaluating, and making decision. In this research, Numrich's sequence is used to analyze how HOTS are built in reading comprehension questions in the textbooks. The result of the analysis in each textbook is presented in Table 4.14, 4.15, and 4.16. Those tables show the analysis result of HOTS realization viewed from task types of Numrich's sequence in each textbook with the detail information in each chapter.

**Table 4.14** Analysis result of reading comprehension questions found in textbook grade X based on Numrich's sequence

No	Chapter	OBS	IA	U&O	INT	IF	A&E	MD
1	1	0	2	16	0	0	0	0
2	2	0	0	8	4	0	0	0
3	3	0	0	4	2	0	0	0
4	4	0	2	12	9	0	4	0
5	5	0	0	10	0	0	0	0
6	6	0	0	15	0	0	0	0
7	8	0	1	8	2	0	2	0
8	9	0	1	7	1	0	4	0
9	10	0	0	12	0	0	0	0
10	11	0	0	15	0	0	0	0
11	13	0	0	9	1	0	0	1
12	14	0	0	8	1	0	0	0
13	15	0	1	0	7	0	0	1
<b>Total</b>		<b>0</b>	<b>7</b>	<b>124</b>	<b>27</b>	<b>0</b>	<b>10</b>	<b>2</b>
<b>Percentage</b>		<b>0%</b>	<b>4.11%</b>	<b>72.94%</b>	<b>16.23%</b>	<b>0%</b>	<b>5.88%</b>	<b>1.17%</b>

From Table 4.14, we find out how task types of Numrich's sequence is realized in the textbook for grade X. In general, it can be seen that not all of the tasks are realized in the reading comprehension questions. Most of the reading comprehension questions tap the task of understanding and organizing instead of HOTS-based tasks. In understanding and organizing students mostly focus on the explicit information in the text which means that this task does not employ higher thinking skill. In this case, HOTS-based tasks, such as inquiring further, analyzing and evaluating, and making decision are less likely emphasized.

Distinctively, the analysis on textbook grade XI shows different result. Table 4.15 displays the analysis result of the reading comprehension questions based on task types of Numrich's sequence in textbook grade XI.



**Table 4.15** Analysis result of reading comprehension questions found in textbook grade XI based on Numrich's sequence

No	Chapter	OBS	I&A	U&O	INT	IF	A&E	MD
1	1	0	0	0	2	0	0	0
2	2	0	1	1	1	0	1	0
3	3	0	2	0	1	0	0	0
4	4	0	0	2	1	0	0	0
5	6	0	0	1	0	0	2	0
6	7	0	4	0	11	0	6	2
7	8	0	1	1	2	0	0	0
<b>Total</b>		<b>0</b>	<b>8</b>	<b>5</b>	<b>18</b>	<b>0</b>	<b>9</b>	<b>2</b>
<b>Percentage</b>		<b>0%</b>	<b>19%</b>	<b>11.9%</b>	<b>42.85%</b>	<b>0%</b>	<b>21.42%</b>	<b>4.76%</b>

From Table 4.15, it is revealed that the majority of reading comprehension questions highlight the realization of interpreting. This task focuses on the text; however shift away from the literal information of the text into the meaning beyond the literal surface. In this textbook, the reading comprehension questions also take concern on the task employing higher level of thinking skills. This is proven by the availability of analyzing and evaluating task which becomes the second main concern which is spotted.

Aside of the analysis result in the textbook for grade XI, the analysis result on the textbook for grade XII shows different results. Table 4.16 shows detail result.

**Table 4.16** Analysis result of reading comprehension questions found in textbook grade XII based on Numrich's sequence

No	Chapter	OBS	IA	U&O	INT	IF	A&E	MD
1	4	0	0	0	5	0	0	0
2	5	0	1	8	5	0	0	0
3	6	0	0	8	1	0	1	0
4	7	0	0	9	1	0	0	0
5	8	0	0	10	3	0	3	0
6	10	0	0	17	0	0	0	0
7	11	0	1	12	1	0	3	1
8	12	0	1	7	0	0	0	2
9	13	0	1	3	4	0	1	0
10	15	0	0	6	2	0	0	0
<b>Total</b>		<b>0</b>	<b>4</b>	<b>80</b>	<b>22</b>	<b>0</b>	<b>8</b>	<b>3</b>
<b>Percentage</b>		<b>0%</b>	<b>3.41%</b>	<b>68.37%</b>	<b>18.8%</b>	<b>0%</b>	<b>6.83%</b>	<b>2.56%</b>

The analysis result in the textbook for grade XII shows similar result with the result of the textbook for grade X. It is unveiled that the reading comprehension questions mostly focus on investigating explicit information in the text through understanding and organizing task. The other tasks which employ higher degree of thinking skills receive small representation. There is only 9.39% of HOTS-based questions. This indicated that questions employing higher thinking skills are only found in small number of questions. Therefore, more questions that are qualified to the task of inquiring further, analyzing and evaluating, and making decision should be added.

The overall information is recapped in Table 4.17.

**Table 4.17** Summary of analysis of reading comprehension questions based on Numrich's sequence

No	Perspective	Task types	Frequency on each Grade of the book					
			X	%	XI	%	XII	%
1	Focus on students' world	Observing	0	0	0	0	0	0
		Identifying assumptions	7	4.11%	8	19%	4	3.41%
2	Focus on the text	Understanding and organizing	124	72.94%	5	11.9%	80	68.37%
		Interpreting	27	16.23%	18	42.85%	22	18.8%
3	Focus beyond the text	Inquiring further	0	0	0	0	0	0
		Analyze and evaluate	10	5.88%	9	21.42%	8	6.83%
		Making decision	2	1.17%	2	4.76%	3	2.56%

Table 4.17 shows the realization of task types of Numrich's sequence in the reading comprehension questions found in the textbooks. From the table, two points are derived: (1) in textbook grade X, understanding and organizing task is emphasized in the reading comprehension questions with more than three quarter of the total questions. This is quite similar with the result in the textbook for grade XII which also focus on understanding and organizing. In contrast, in the textbook for grade XI interpreting receive highest attention. This task type is followed by analyzing and evaluating, identifying assumptions, understanding and organizing, making decision, and the last observing and inquiring further; (2) those realizations release the information regarding the realization of HOTS-based reading comprehension questions which needs more addition. In order to see the realization

of HOTS-based question in detail the following sub sub-chapters elaborate the realization.

#### **4.1.4.1 Inquiring further**

Inquiring further purposefully pushes students to enrich their information and knowledge by surveying public, identifying and interviewing a specialist on the topic, and conducting library or internet research (Beaumont, 2010). This task is advantageous in order to obtain more information and insights regarding the topic that is learnt. However, from the three textbooks, there is no question instructing students to conduct this task.

#### **4.1.4.2 Analyzing and evaluating**

In this stage, students are required to analyze and evaluate the topic by conducting synthesizing information, critiquing, reflecting on related ideas, making logical conclusions, or reevaluating assumptions (Beaumont, 2010). This stage becomes the alternative platform to focus beyond the text if inquiring further task is not realized. This task is essential to develop students' higher thinking ability. From those three textbooks, textbook for grade XI becomes the one providing this task properly. This task has higher percentage than the other task types that focus beyond the text. Here are the sample questions qualified to this task type. Table 4.18 shows the sample questions of analyzing and evaluating task type.

**Table 4.18** Sample questions of analyzing and evaluating task type

Sample questions	Grade
What do you think is the most interesting scene in Tanjung Putting National Park?	X
Do you think the poem can change people?	XI
Why do you think living in apartment is getting popular?	XII

To deal with the first sample question mentioned above, students need to critique the information from the text. Students are given a text explaining Tanjung Putting National Park with detail information regarding the scene in the park. What the question wants students to do is giving their judgement based on that information. They have to judge which scene is the most interesting one after comparing one feature with other features of the scene. The second question requires students to reflect on related ideas after carefully analyzing the poem and considering how the poem may influence people. Students are demanded to reflect whether the poem and its messages can change people in taking action or not. This goes the same for the last question where students are required to reflect why living in apartment is currently popular in the society. Students need to evaluate how living in apartment is and why society starts choosing apartment as the place to live. By evaluating the trend of living in apartment and seeing the current condition of the surroundings give a hint for students to answer the question.

#### **4.1.4.3 Making Decision**

Making decision is a moment for students to devise their higher thinking skill in a non-classroom setting. This stage does not see the course that students take and

knowledge that students learnt as an end, instead as a miles stone to go further (Beaumont, 2010). The central attention on this stage is encouraging students to address solutions toward certain problem, to pursue issues they are interested in, clarify information they get, or consider the best action to do in a maddeningly situation. In order to apply this task, students may do problem solving, proposing solutions, taking action, or participating. This task is extremely important in promoting critical thinking.

However, this task is less likely highlighted. There is only 2 questions in textbook or grade X, 2 questions in textbook for grade XI, and 3 questions in textbook for grade XII. This implies that this task has less attention which might affect the development of higher thinking skills. This happens since students are less habituated with the skill. Table 4.19 displays the sample questions of making decision task type.

**Table 4.19** Sample questions of making decision task type

Sample questions	Grade
If you were in the story, which role would you play?	X
Who is your hero?	XI
In your opinion, what can prevent us from committing such a crime?	XII

From the sample questions shown in table 4.19, those three questions primarily encourage students to take action, and propose solution. First question leads students to think of which role would students play if they were in the story.

They have to consider the characteristics of the characters and also weighing the positive and negative impacts of being a specific character. By weighing both sides, it is possible for students to start making decision of which character they may play. This is also applied for the second question which demands students to decide their hero. A song telling about hero was presented for students. From the song, students can derive meanings and then they are asked to determine the one suits to be labelled as a hero.

Lastly, the question pushes students to propose solution. In this context, a news reporting a crime was presented for students. Having known the information, students are required to formulate a solution that fits to the problem. Firstly, they need to analyze the problem and the root of the problem. Having known the problem, they need to formulate a solution that fits the problem and can solve the problem in a long run.

#### **4.1.5. The realization of HOTS in comparison to the 2013 curriculum**

This subchapter explains the realization of HOTS in comparison to 2013 curriculum. BSNP set standards on realizing HOTS in the textbook. In designing textbook, academic skills such as exploring and employing information, solving problems and making decisions are highly encouraged to be infused in every text and communicative action. This means that thinking in higher level are expected to be instilled.

Referring to the standards, based on the two frameworks used in this present research, it was found that HOTS are not the skills that are mostly emphasized since

most of the reading comprehension questions focus on LOTS. HOTS are only adequately realized in the reading comprehension questions in the textbook for grade XI. Moreover, HOTS are not realized in every chapter providing reading comprehension questions. This shows that HOTS are developed in reading comprehension questions. However, in building higher thinking skills in reference to BSNP, HOTS-based questions should be added. Thus, it is revealed that the reading comprehension questions develop HOTS, but in reference to BSNP standard, the realization seems to be less emphasized.

#### 4.1.5 Result of questionnaire

This present research uses questionnaire to collect English teachers' perspectives pertaining to HOTS in teaching-learning activity. In order to explore deeper, Table 4.20 shows the detail information.

**Table 4.20** Questionnaire result

No	Questions	Respond
1	It is important to introduce HOTS to the students	Strongly agree
2	It is important to develop HOTS in English textbook	Agree
3	It is important to implement HOTS in exercises for students	Strongly agree
4	It is important to realize HOTS in teaching reading	Agree
5	It is important to include HOTS in reading exercises	Strongly agree
6	It is important to create HOTS-based questions in reading comprehension questions	Strongly agree



No	Questions	Respond
7	Realizing HOTS in reading comprehension questions could enhance students' critical thinking	Agree
8	HOTS are well-treated in reading comprehension questions in English textbooks produced by ministry of education and culture	Moderately agree

Table 4.20 shows two English teacher's perspective regarding the implementation of HOTS. From the questionnaire, both teachers admit the importance of introducing HOTS to students. They admit it to the extent of strongly agree, which means they strongly support the introduction of HOTS to students. In addition, they also admit that HOTS are important and need to be realized in English textbooks, in exercises, reading exercises, and more specifically in reading comprehension questions. Furthermore, they strongly agree that the realization of HOTS in reading exercises and specifically in reading comprehension questions. They agree upon those points since they believe that HOTS could enhance the development of critical thinking. Critical thinking is highly crucial to be developed in current days. However, in English textbooks published by the Ministry of Education and culture, the reading comprehension questions are lack of HOTS. Both teachers who are the users of the textbooks in teaching-learning activity stated that HOTS are moderately treated there. This impliedly means that HOTS are found there, but not adequately provided there. In conclusion, both English teachers agree in the realization of HOTS in teaching-learning activity and in its elements, such as, textbooks, exercises, and the sample questions of the exercises. However, the

realization is only moderately found in English textbooks published by the Ministry of Education and Culture.

## **4.2 Discussion**

As a shouted competencies, HOTS are mandated by the 2013 curriculum to be implemented in the teaching-learning components, such as textbook. It is expected that HOTS are imposed in the exercises in the textbook as a platform to train HOTS for students since textbook is an effective platform to foster HOTS (Pratama & Retnawati, 2018).

Referring to the demand of the curriculum, this present research analyzes the realization of HOTS in reading comprehension questions in English textbooks published by the Ministry of Education and Culture using two frameworks namely, cognitive domain of Bloom's revised taxonomy (2001) and task types of Numrich's sequence (Beaumont, 2010). The results revealed that HOTS are not adequately realized in the reading comprehension questions. This claim raised under the reason that HOTS are only well-treated in the textbook for grade XI. In comparison, textbooks for grade X and XII weakly touch HOTS in reading comprehension questions.

In the textbooks for grade X and XII, there is a huge gap between the realization of lower thinking skills and higher thinking skills. The majority of the reading comprehension questions emphasize lower thinking skills more than the higher thinking skills. This supports the researched obtained by Ulum (2012),

Barashid (2020), and Tangsakul (2017) which released that most of the reading comprehension questions are taped by the lower thinking skills.

According to the two frameworks, the reading comprehension questions highlighted remembering category (cognitive domain of Bloom's revised taxonomy, 2001) and understanding and organizing task (task types of Numrich's sequence) at the most. Remembering and understanding & organizing share similarity in terms of the skills which are employed. Both focus on recalling previous information, restating or repeating previously learnt knowledge, and mentioning the explicit information stated in the text. These processes are good to enhance students' ability to recall previous information and they are a must; however, they do not hugely contribute to the growth of higher thinking skills (Wu & Pei, 2018, Tangsakul et al. 2017). In promoting HOTS, what students need is the exposure to the skills that prompt students to reason, reflect and solve problems, and the skills beyond memorizing, recalling factual knowledge and concepts (Wu & Pei, 2018). Therefore, it obviously indicates that HOTS-based reading comprehension questions should be increased as an effort to promote higher thinking skills. This realization could give more exposure that familiarize students with higher thinking skills (Pratama & Retnawati, 2018).

In contrast to those findings, it is unveiled that HOTS are realized sufficiently in the reading comprehension questions in the textbook for grade XI. From 42 reading comprehension questions, it is found that there are 26 HOTS-based questions. This supports the finding obtained by Setiyawati (2016) which reveals that the reading comprehension questions are dominated by HOTS than LOTS.

From the findings, it is found that evaluation is the category in which students mostly work on. In addition, according to task types of Numrich's sequence (Beaumont, 2010) the reading comprehension questions highlight the task of interpreting and analyzing and evaluating which contribute to the development of higher thinking skills. Interpreting leads students to move away from the literal surface of information and to be more aware of other less obvious ideas (Beaumont, 2010). Although this task still focuses on the text, this task could contribute as the starting point for students to start understand deeper and train to think in higher level. Furthermore, the reading comprehension questions in the textbook for grade XI, also leads students to do analyzing and evaluating. The process of analyzing and evaluating are the process that could invite students to think critically, which means that in this stage, students employ higher thinking skills (Scriven & Paul, 2009 in Beaumont, 2010). This shows that the reading comprehension questions in the textbook for grade XI mainly emphasize the skills of analyzing and evaluating in which HOTS can be assessed and trained (Brookhart, 2010).

Referring to the result in the textbook for grade XI, it meets the expectation of English teachers regarding the implementation of HOTS in teaching-learning activity. Both English teachers believe that HOTS are important elements to be realized in teaching-learning activity, and more specifically in the textbooks, exercises, and also reading comprehension questions. Referring to this present research, only textbook for grade XI does realize HOTS in the reading comprehension questions. Textbooks for grade X and XII realize HOTS; but, in a very small portion. These results directly engage with the English teachers'

perspective pertaining to HOTS realization in the reading comprehension questions. They, who are the users of the textbooks, perceive that HOTS are moderately realized in the reading comprehension questions. This means that HOTS are found, but not in adequate number. This confirms that HOTS are only well-treated in the textbook for grade XI, but not in the textbooks for grade X and XII. Therefore, it is assumed that HOTS are included in the reading comprehension questions in the analyzed textbooks; however, the majority of the questions are still tapped by the lower thinking skills.

In 2013 curriculum, BSNP requires the integration of HOTS in every text, communicative exercise, and task that are designed in the textbook. In comparison to this, the realization of HOTS meets the standards of BSNP in which HOTS are developed in the reading comprehension questions in the three textbooks. However, referring to BSNP, HOTS realization is not well developed. This claim raises under the reason that HOTS is less emphasized than LOTS. Moreover, HOTS-based reading comprehension questions are only found in several chapters of the textbooks. This indicates that HOTS should be added since the abundance of LOTS-based questions should be balanced by the adequate existence of HOTS-based questions in order to foster the development of higher degree thinking skills. Furthermore, Collins (2014) emphasized that bulk of HOTS exercises should be ideally increased when students enter year 11 and 12 of schools. Therefore, from this present research, one main finding emerges showing that HOTS-based reading comprehension questions are realized in three textbooks; however, in order to meet BSNP requirement in realizing HOTS, more HOTS-based question is essential to

be increased in order to equally familiarize HOTS for students and further enact the development of students' ability to think critically.

## **CHAPTER V**

### **CONCLUSIONS AND SUGGESTIONS**

This chapter comprises the conclusions and suggestions of this present research. The conclusions are drawn from the findings of the research and the suggestions are given for the future implementation of HOTS in reading comprehension questions. In addition, the suggestions are also given for the teachers and future researchers regarding HOTS implementation in reading comprehension questions.

#### **5.1 Conclusions**

From the findings in the chapter IV, there are two points that can be inferred: (1) in the textbooks for grade X and XII, HOTS are not adequately realized. There is a huge gap between the realization of HOTS and LOTS; (2) only in textbook for grade XI HOTS are properly realized. This can be confirmed by noting the percentages of the questions which employ HOTS. From the total 42 questions, HOTS-based questions are found in 61.9% of the questions. This indicates that the textbook for grade XI gives enough stimulation to promote HOTS through the reading comprehension questions; (3) in comparison to 2013 curriculum, HOTS realization seems to be less relevant to. However, since the majority of the questions emphasize LOTS, HOTS questions are highly encouraged to be added to equally develop higher thinking skills.

## 5.2 Suggestions

The results of the analysis bring us the evidence that HOTS should be ideally encouraged. Moreover, HOTS are essential in educational field and in wider fields of life especially in this century. The 21<sup>st</sup> century skills do emphasize those skills. Hence, the results of this research call the education stakeholders to put more attention on the development of HOTS.

For teacher, when HOTS are not sufficiently realized, it is the time for them to be more aware to find ways to enrich HOTS exercises, specifically HOTS-based questions in the class. This can be done by giving more HOTS-based reading comprehension questions to encourage students in exploring and exercising HOTS.

Furthermore, it also encourages textbooks' writers to pay more attention on the development of HOTS for students through the exercises in the textbooks. The availability of enough HOTS-based questions is quite necessary for the development of HOTS for students. This is vital since textbooks largely become the main source of teaching-learning activity. Therefore, the implementation of HOTS should be added and enlarged.

Lastly, realizing the importance of HOTS and noting the results of this present research, it is crucial to explore HOTS deeper. The results of this present research offer a basis for future research in exploring HOTS in wider context; whether to explore HOTS in different skill, different textbook, or different part of content of textbook. Those efforts can be beneficial to engage with the issue of fostering HOTS in teaching-learning activity.



By providing more exposure of HOTS-based questions for students, it opens wider opportunity for students to practice the skills and further develop the skills. By encouraging these skills, it could develop students' ability in thinking critically as how it is envisioned by the curriculum.

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## APPENDIX 1

### Analysis of the reading comprehension questions found in the textbook for grade X based on cognitive level of Bloom's revised taxonomy (2001) and task types of Numrich's sequence (Beaumont, 2010)

#### 1. Identifying data according to Cognitive level of Bloom's revised taxonomy (2001)

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	How does Hannah contact Alifa	Chapter 1	V					
2	Does Hannah want to be Alifa's friend		V					
3	Where does Hannah study?		V					
4	Tell me about Hannah's family!		V					
5	What are Hannah's hobbies?		V					
6	Does she like animals? What animals does she has?		V					
7	What profession would she like to have after graduating from her school?		V					
8	Have you ever written an email to a pen pal? When?		V					
9	Does Saidah want to be Alifa's friend?		V					
10	Where is she from?		V					
11	Where does Saidah study?		V					
12	Tell me about Saidah's family!		V					
13	What are Saidah's hobbies?		V					
14	Does she have favorite singer?		V					
15	Does she like reading books? Which authors does she like?		V					

16	What profession would she like to have later?		V					
17	Is she interested in visiting Indonesia? How does she know Indonesia?		V					
18	Have you ever written a letter to get a pen pal? When?		V					
	Total		18	0	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	Why do all those people congratulate Alif?	Chapter 2	V					
2	What expressions do they use to congratulate Alif?		V					
3	How does Alif respond to their congratulating expressions?		V					
4	What is the social purpose of congratulating people?			V				
5	When do we congratulate people?			V				
6	What are the expressions commonly used to congratulate people?		V					
7	What good news about Dita does Ditto know?		V					
8	What does Ditto say to Dita related to the news?		V					
9	What do the expressions mean?			V				
10	What is Ditto's purpose of saying that to Dita?		V					
11	How does Dita respond to what Ditto says?		V					

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
12	When do you think you will say 'congratulations' to other people?			V				
	Total		8	4	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What are Bayu, Riri, and Santi discussing?	Chapter 3		V				
2	Who already have the plan for the weekend?		V					
3	What are their plans?		V					
4	Who doesn't have the plan? What does s/he finally decide to do on weekend?		V					
5	What do the sentences typed in bold express?			V				
6	When do people use those expressions?			V				
	Total		3	3	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	Based on the text, can you guess what ecotourism is? Give some examples of other ecotourism destinations.	Chapter 4		V				
2	As one of ecotourism destinations, what does Tanjung Putting National Park offer to tourist?		V					
3	How is the different from the parks in cities?		V					
4	How is camp Leaky related to Tanjung Putting National Park?		V					
5	What does the word ex-captive tell you about the orangutans in camp leaky, which is a rehabilitation site for orangutans?			V				
6	How can people reach camp leaky?		V					
7	What is special about the means of transportation to camp leaky?		V					

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
8	What can tourists enjoy during their trip to camp leaky?		V					
9	What do you think is the most interesting scene in Tanjung Putting National Park?						V	
10	How important is the research by Dr. Birute Galdikas?						V	
11	What is the author's purpose in writing this text?					V		
12	How is each paragraph related to each other?					V		
13	What is the most dominant tense used in this text?		V					
14	What is Taj Mahal actually?		V					
15	What impression do you get when you read the word majestically?		V					
16	Why did the king construct Taj Mahal?		V					



No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
17	What does the phrase 'the crown of the palace' imply?			V				
18	Read the third line of paragraph two. What impression did you get after reading the description?		V					
19	How are the materials and architectural design of Taj Mahal?		V					
20	What do all the materials and the architecture indicate?			V				
21	Where was the queen actually buried?		V					
22	When do you think is the best time to see Taj Mahal? Why do you think so?						V	
23	What do you think about the inclusion of Taj Mahal as one of the Seven Wonders of the world?						V	

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
24	What is the writer's purpose in writing the essay?					V		
25	How does the writer organize his idea?					V		
26	What reaction from readers does the writer expect?					V		
27	Read the text 1 again. Find out the similarities between text 1 and text 2.					V		
	Total		13	4	0	6	4	0

N o	Questions	Locatio n	Rememb er	Understa nd	Appl y	Analyz e	Evaluat e	Creat e
1	Where is Niagara falls located?	Chapte r 5	V					
2	Mention the three waterfalls that form the Niagara falls?		V					
3	What can people enjoy in the cave of the winds?		V					
4	Can people ride on the maid of the mist boat tour in January?		V					
5	Where can people watch a film of the thundering falls with completely different background?		V					
6	Can the tourist enjoy the film in their own language?		V					
7	What is kept in Niagara science museum?		V					
8	What is shown in Niagara's		V					

	wax museum of history?							
9	Where can people see the story of how electricity was made?		V					
10	Is it possible for people to have rainbow air helicopter tours at night?		V					
	Total		10	0	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	Who wrote the announcement?	Chapter 6	V					
2	When was the announcement released?		V					
3	Who is the announcement for?		V					
4	What is the announcement about?			V				
5	When and where will actually the concert be held?		V					
6	What has the faith & D entertainment management submitted to CJes entertainment?		V					
7	Has there been an announcement regarding ticket sales? Why do you think so?		V					
8	What did Faith and D entertainment write in the last paragraph?		V					
9	Who wrote the		V					

	announcem ent?							
10	Who is the announcem ent for?		V					
11	What is the announcem ent about?			V				
12	How long does the term last?		V					
13	How does the registration occur?		V					
14	What will the school do to other applicants when all the student spots are full?		V					
15	What do the participants receive?		V					
	Total		13	2	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	How did the writer feel when she knew that Afgan was coming to town?	Chapter 8	V					
2	Did the writer want to see the concert?			V				
3	When and where was the meet-and-greet event?		V					
4	What is Afganism?		V					
5	How did the fans wait for Afgan?		V					
6	What did Afgan do when he showed up in the lobby?		V					
7	How did the fans react when Afgan sang his hit single?		V					
8	How did the writer feel when she finally got the turn to get Afgan's signature?		V					
9	Did she feel nervous?		V					
10	What is the writer's opinion about the meet-and-greet event?					V		

11	Why do you think people like Afgan?						V	
12	Is there something in the text that is not relevant to your life? Why?						V	
13	Have you ever heard or read a text about a similar event?		V					
	Total		9	1	0	1	2	0



No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What is the passage about?	Chapter 9		V				
2	When did the battle take place?		V					
3	Where did it happen?		V					
4	What caused the battle? Draw a diagram that shows chronologically the events that led to the battle!					V		
5	What do you think about the Indonesian military power compared to that of the British army at that time?						V	
6	What made the Indonesians dare to face the British army military aggression?						V	
7	Did the Indonesian lose or win in the battle? Why do you think so?		V					
8	How did the battle influence the national revolution at that time?			V				

9	Who was the prominent figure in the battle? What did he do?		V					
10	Indonesia has gone through many battles. Why do you think the date of the battle of Surabaya is used as a momentum to commemorate our hero's contributions?							V
11	Describe in one word the Indonesians who defended their city at that time?			V				
12	Do you think that the information in the text is clear?						V	
13	Have you ever heard the other texts that tell about similar events?		V					
	Total		5	3	0	1	3	1

N o	Questions	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	When did Habibie's father die?	Chapte r 10	V					
2	Why did Habibie move to Germany?		V					
3	When did Habibie receive a degree in engineering in Germany?		V					
4	Why did Habibie remain in Germany after getting a degree?		V					
5	What happened to Habibie in 1962?		V					
6	Had Habibie met Ainun before meeting her in 1962?		V					
7	Where did the new couple settle in after getting married in May 1962?		V					
8	What was Habibie's role in Talbot?		V					

9	What theory was developed by Habibie?		V					
10	What was Habibie's first position when he returned to Indonesia?		V					
11	When was Habibie appointed CEO of IPTN?		V					
12	What had happened before Habibie was sworn in as a president?		V					
	Total		12	0	0	0	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	When was Cut Nyak Dien awarded the title of Indonesian National Hero?	Chapter 11	V					
2	Tell your classmates about Cut Nyak Dien's parents!		V					

3	What education did she receive when she was young?		V					
4	Who was Teuku Cik Ibrahim Lamnga?		V					
5	When did the Aceh war start?		V					
6	What happened in Aceh in 1874?		V					
7	Why did Cut Nyak Dien swear to destroy the Dutch?		V					
8	What was the effect Cut Nyak Dien's marriage to Teuku Umar on the Aceh armies?		V					
9	Why did Teuku Umar surrender to Dutch in 1893?		V					
10	How was Teuku Umar killed?		V					
11	According to the text, how should an Acehness woman respond to the death of her family		V					

	member in a war?							
12	What did Cut Nyak Dien suffer from when she was old?		V					
13	What was done by Cut Gambang after Cut Nyak Dien was captured?		V					
14	When Cut Nyak Dien was brought to Banda Aceh, was her nearsightedness getting better?		V					
15	Why did the Dutch put her into exile in Sumedang?		V					
16	Had you lived close to Cut Nyak Dien, what would you have done to support her efforts in fighting against the Dutch colonization?							V
	Total		15	0	0	0	0	1

N o	Question s	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	Why did Malin Kundang and his mother have to live hard?	Chapte r 13	V					
2	Give an example that Malin Kundang was a healthy, dilligent, and strong boy!		V					
3	How did the merchant allow Malin Kundang to join him in the sail?		V					
4	What happened many years after Malin Kundang join the sail?		V					
5	How did the local people react when they saw Malin Kundang landing on the coast?		V					

6	What did Malin Kundang's mother do when she heard that Malin Kundang landed on the coast?		V					
7	What made Malin Kundang's mother sad and angry?		V					
8	What did she do when Malin Kundang denied that she was his mother?		V					
9	How did the curse happen?		V					
10	What is the moral of the story?							V
	Total		9	0	0	0	0	1



No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	Who is Strong Wind?	Chapter 14	V					
2	What was Strong Wind's special capability?		V					
3	How would Strong Wind's sister know that the girls were lying?		V					
4	Who burned the chief's youngest daughter?		V					
5	Who could see Strong Wind and how could she do that?		V					
6	How did the chief's youngest daughter regain her old face?		V					
7	What did Strong Wind change into an aspen tree?		V					
8	Did Strong Wind know that the chief's elder daughters were rude to their youngest sister?		V					
9	Why did Strong Wind decide to have the chief's youngest daughter?		V					
10	If you were in the story, which role would you play? Why?						V	
	Total		9	0	0	0	1	0

N o	Questions	Locati on	Remem ber	Underst and	Appl y	Analy ze	Evalu ate	Crea te
1	What does the first verse of the song talk about? Say it in one sentence	Chapt er 15		V				
2	In your opinion, what does “To brighten up even your darkest night” mean?			V				
3	Why does the writer mention four seasons i.e. winter, spring, summer or fall in the song?					V		
4	What does this verse mean? Say it in one sentence.			V				
5	Which verse is repeated in the song? Why?						V	
6	What is “ain’t” ? Can you find the synonym of ain’t?			V				
7	In general, what is the song about?			V				
8	What is your opinion about the song?		V					
	Total		1	5	0	1	1	0

## 2. Identifying data according to task types of Numrich's sequence

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	How does Hannah contact Alifa	Chapter 1			V				
2	Does Hannah want to be Alifa's friend				V				
3	Where does Hannah study?				V				
4	Tell me about Hannah's family!				V				
5	What are Hannah's hobbies?				V				
6	Does she like animals? What animals does she has?				V				
7	What profession would she like to have after graduating from her school?				V				
8	Have you ever written an email to a pen pal? When?			V					
9	Does Saidah want to be Alifa's friend?				V				
10	Where is she from?				V				
11	Where does Saidah study?				V				
12	Tell me about Saidah's family!				V				
13	What are Saidah's hobbies?				V				
14	Does she have favorite singer?				V				
15	Does she like reading books? Which authors does she like?				V				
16	What profession would she like to have later?				V				
17	Is she interested in visiting Indonesia? How does she know Indonesia?				V				
18	Have you ever written a letter to get a pen pal? When?			V					
	Total		0	2	16	0	0	0	0

No	Questions	Location	Obs	IA	U&O	INT	IF	A&E	MD
1	Why do all those people congratulate Alif?	Chapter 2			V				
2	What expressions do they use to congratulate Alif?				V				
3	How does Alif respond to their congratulating expressions?				V				
4	What is the social purpose of congratulating people?					V			
5	When do we congratulate people?					V			
6	What are the expressions commonly used to congratulate people?				V				
7	What good news about Dita does Ditto know?				V				
8	What does Ditto say to Dita related to the news?				V				
9	What do the expressions mean?					V			
10	What is Ditto's purpose of saying that to Dita?				V				
11	How does Dita respond to what Ditto says?				V				
12	When do you think you will say 'congratulations' to other people?					V			
	Total		0	0	8	4	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What are Bayu, Riri, and Santi discussing?	Chapter 3			V				
2	Who already have the plan for the weekend?				V				
3	What are their plans?				V				
4	Who doesn't have the plan? What does s/he finally decide to do on weekend?				V				
5	What do the sentences typed in bold express?					V			
6	When do people use those expressions?					V			
	Total		0	0	4	2	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Based on the text, can you guess what ecotourism is? Give some examples of other ecotourism destinations.	Chapter 4				V			
2	As one of ecotourism destinations, what does Tanjung Putting National Park offer to tourist?				V				
3	How is the different from the parks in cities?				V				
4	How is camp Leaky related to Tanjung Putting National Park?				V				
5	What does the word ex-captive tell you about the orangutans in camp leaky, which is a rehabilitation site for orangutans?					V			
6	How can people reach camp leaky?				V				
7	What is special about the means of transportation to camp leaky?				V				
8	What can tourists enjoy during their trip to camp leaky?				V				

9	What do you think is the most interesting scene in Tanjung Putting National Park?							V	
10	How important is the research by Dr. Birute Galdikas?							V	
11	What is the author's purpose in writing this text?					V			
12	How is each paragraph related to each other?					V			
13	What is the most dominant tense used in this text?				V				
14	What is Taj Mahal actually?				V				
15	What impression do you get when you read the word majestically?			V					
16	Why did the king construct Taj Mahal?				V				
17	What does the phrase 'the crown of the palace' imply?					V			
18	Read the third line of paragraph two. What impression did you get after reading the description?			V					
19	How are the materials and architectural design of Taj Mahal?				V				
20	What do all the materials and the architecture indicate?					V			
21	Where was the queen actually buried?				V				
22	When do you think is the best time to see Taj Mahal? Why do you think so?							V	
23	What do you think about the inclusion of Taj Mahal as one of the Seven Wonders of the world?							V	

24	What is the writer's purpose in writing the essay?					V			
25	How does the writer organize his idea?					V			
26	What reaction from readers does the writer expect?					V			
27	Read the text 1 again. Find out the similarities between text 1 and text 2.				V				
	Total		0	2	12	9	0	4	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Where is Niagara falls located?	Chapter 5			V				
2	Mention the three waterfalls that form the Niagara falls?				V				
3	What can people enjoy in the cave of the winds?				V				
4	Can people ride on the maid of the mist boat tour in January?				V				
5	Where can people watch a film of the thundering falls with completely different background?				V				
6	Can the tourist enjoy the film in their own language?				V				
7	What is kept in Niagara science museum?				V				
8	What is shown in Niagara's wax museum of history?				V				
9	Where can people see the story of how electricity was made?				V				
10	Is it possible for people to have rainbow air helicopter tours at night?				V				
	Total		0	0	10	0	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Who wrote the announcement?	Chapter 6			V				
2	When was the announcement released?				V				
3	Who is the announcement for?				V				
4	What is the announcement about?				V				
5	When and where will actually the concert be held?				V				
6	What has the faith & D entertainment management submitted to CJes entertainment?				V				
7	Has there been an announcement regarding ticket sales? Why do you think so?				V				
8	What did Faith and D entertainment write in the last paragraph?				V				
9	Who wrote the announcement?				V				
10	Who is the announcement for?				V				
11	What is the announcement about?				V				
12	How long does the term last?				V				
13	How does the registration occur?				V				
14	What will the school do to other applicants when all the student spots are full?				V				
15	What do the participants receive?				V				
	Total		0	0	15	0	0	0	0



No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	How did the writer feel when she knew that Afgan was coming to town?	Chapter 8			V				
2	Did the writer want to see the concert?					V			
3	When and where was the meet-and-greet event?				V				
4	What is Afganism?				V				
5	How did the fans wait for Afgan?				V				
6	What did Afgan do when he showed up in the lobby?				V				
7	How did the fans react when Afgan sang his hit single?				V				
8	How did the writer feel when she finally got the turn to get Afgan's signature?				V				
9	Did she feel nervous?				V				
10	What is the writer's opinion about the meet-and-greet event?					V			
11	Why do you think people like Afgan?							V	
12	Is there something in the text that is not relevant to your life? Why?							V	
13	Have you ever heard or read a text about a similar event?			V					
	Total		0	1	8	2	0	2	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is the passage about?	Chapter 9			V				
2	When did the battle take place?				V				
3	Where did it happen?				V				
4	What caused the battle? Draw a diagram that shows chronologically the events that led to the battle!				V				
5	What do you think about the Indonesian military power compared to that of the British army at that time?							V	
6	What made the Indonesians dare to face the British army military aggression?							V	
7	Did the Indonesian lose or win in the battle? Why do you think so?				V				
8	How did the battle influence the national revolution at that time?				V				
9	Who was the prominent figure in the battle? What did he do?				V				
10	Indonesia has gone through many battles. Why do you think the date of the battle of Surabaya is used as a momentum to commemorate our hero's contributions?							V	
11	Describe in one word the Indonesians who defended their city at that time?					V			
12	Do you think that the information in the text is clear?							V	
13	Have you ever heard the other texts that tell about similar events?			V					
	Total		0	1	7	1	0	4	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	When did Habibie's father die?	Chapter 10			V				
2	Why did Habibie move to Germany?				V				
3	When did Habibie receive a degree in engineering in Germany?				V				
4	Why did Habibie remain in Germany after getting a degree?				V				
5	What happened to Habibie in 1962?				V				
6	Had Habibie met Ainun before meeting her in 1962?				V				
7	Where did the new couple settle in after getting married in May 1962?				V				
8	What was Habibie's role in Talbot?				V				
9	What theory was developed by Habibie?				V				
10	What was Habibie's first position when he returned to Indonesia?				V				
11	When was Habibie appointed CEO of IPTN?				V				
12	What had happened before Habibie was sworn in as a president?				V				
	Total		0	0	12	0	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	When was Cut Nyak Dien awarded the title of Indonesian National Hero?	Chapter 11			V				
2	Tell your classmates about Cut Nyak Dien's parents!				V				
3	What education did she receive when she was young?				V				
4	Who was Teuku Cik Ibrahim Lamnga?				V				
5	When did the Aceh war start?				V				
6	What happened in Aceh in 1874?				V				
7	Why did Cut Nyak Dien swear to destroy the Dutch?				V				
8	What was the effect Cut Nyak Dien's marriage to Teuku Umar on the Aceh armies?				V				
9	Why did Teuku Umar surrender to Dutch in 1893?				V				
10	How was Teuku Umar killed?				V				
11	According to the text, how should an Acehnese woman respond to the death of her family member in a war?				V				
12	What did Cut Nyak Dien suffer from when she was old?				V				
13	What was done by Cut Gambang after Cut Nyak Dien was captured?				V				
14	When Cut Nyak Dien was brought to Banda Aceh, was her nearsightedness getting better?				V				
15	Why did the Dutch put her into exile in Sumedang?				V				
16	Had you lived close to Cut Nyak Dien, what would you have done to support her efforts in fighting against the Dutch colonization?								V
	Total		0	0	15	0	0	0	1

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Why did Malin Kundang and his mother have to live hard?	Chapter 13			V				
2	Give an example that Malin Kundang was a healthy, dilligent, and strong boy!				V				
3	How did the merchant allow Malin Kundang to join him in the sail?				V				
4	What happened many years after Malin Kundang join the sail?				V				
5	How did the local people react when they saw Malin Kundang landing on the coast?				V				
6	What did Malin Kundang's mother do when she heard that Malin Kundang landed on the coast?				V				
7	What made Malin Kundang's mother sad and angry?				V				
8	What did she do when Malin Kundang denied that she was his mother?				V				
9	How did the curse happen?				V				
10	What is the moral of the story?					V			
	Total		0	0	9	1	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Who is Strong Wind?	Chapter 14			V				
2	What was Strong Wind's special capability?				V				
3	How would Strong Wind's sister know that the girls were lying?				V				
4	Who burned the chief's youngest daughter?				V				
5	Who could see Strong Wind and how could she do that?				V				
6	How did the chief's youngest daughter regain her old face?				V				
7	What did Strong Wind change into an aspen tree?				V				
8	Did Strong Wind know that the chief's elder daughters were rude to their youngest sister?					V			
9	Why did Strong Wind decide to have the chief's youngest daughter?				V				
10	If you were in the story, which role would you play? Why?								V
	Total		0	0	8	1	0	0	1

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What does the first verse of the song talk about? Say it in one sentence	Chapter 15				V			
2	In your opinion, what does “To brighten up even your darkest night” mean?					V			
3	Why does the writer mention four seasons i.e. winter, spring, summer or fall in the song?					V			
4	What does this verse mean? Say it in one sentence.					V			
5	Which verse is repeated in the song? Why?					V			
6	What is “a i n’ t” ? Can you find the synonym of a i n’ t ?					V			
7	In general, what is the song about?					V			
8	What is your opinion about the song?			V					
	Total		0	1	0	7	0	0	0

OBS : Observing

IA : Identifying assumption

U&O : Understanding and organizing

INT : Interpreting

IF : Inquiring further

A&E : Analyzing and evaluating

MD : Making decision

## APPENDIX 2

**Analysis of the reading comprehension questions found in the textbook for grade XI based on cognitive level of Bloom's revised taxonomy (2001) and critical thinking tasks of Numrich's sequence (Beaumont, 2010)**

### 1. Identifying data (textbook grade XI) according to Bloom's revised taxonomy (2001)

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What kind of interpersonal transaction is going on the above conversation?	Chapter 1				V		
2	What kind of interpersonal transaction is going on the above conversation?					V		
	Total		0	0	0	2	0	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What is happening between Siti and Jane?	Chapter 2		V				
2	What kind of conversation are they having?					V		
3	Whom do you agree with, Jane or Siti? Why?						V	
4	Have you ever witnessed bullying? Describe how you felt?		V					
	Total		1	1	0	1	1	0



N o	Questions	Locat ion	Reme mber	Unders tand	Ap ply	Anal yze	Evalu ate	Cre ate
1	Why do people write and send invitations?	Chap ter 3	V					
2	Why do you think invitations have become important in our society?						V	
3	What kind of invitation do you think is in the excerpt given above? How can you say that?					V		
	Total		1	0	0	1	1	0

N o	Questions	Locat ion	Reme mber	Underst and	Ap ply	Anal yze	Evalu ate	Crea te
1	What is global warming?	Chap ter 4	V					
2	Is it severe problem?		V					
3	What kind of text is given above?					V		
	Total		2	0	0	1	0	0

N o	Questions	Locati on	Remem ber	Underst and	Ap ply	Anal yze	Evalu ate	Crea te
1	What do you think is happening in the above conversation?	Chapt er 6		V				
2	Do you think smoking is dangerous?						V	
3	Do you think it should be banned?						V	
	Total		0	1	0	0	2	0

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What do you think the title stand by me means?	Chapter 7		V				
2	Do you consider stand by me an inspirational song? Why?						V	
3	If you had to change the lyrics of stand by me, which lyrics would you change?							V
4	What do you think is the theme of this song?					V		
5	Is this an inspiring song? Does it inspire you?						V	
6	Do you think you can overcome all the obstacles and live in a happy and prosperous world?						V	
7	What is the song hero about?			V				
8	According to the song, what makes a hero?			V				
9	Who is your hero?							V
10	How does this song make you feel?		V					
11	Invictus is a latin word that means unconquered. What does it say about the poem?			V				
12	Why do you think the poet is not frightened?					V		
13	Do you like the poem invictus?		V					

14	Do you agree with what the poet is saying? Why? Or why not?						V	
15	Do you think the poems can change people?						V	
16	What do you think the poem the road not taken is about?			V				
17	What might the two roads represent or symbolize? Make a list of possibilities and discuss with your partner!							V
18	Did the poet choose between the roads? What road do you think he chose?					V		
19	Do you think the poet is content with his choice? Give reasons to support your answer!					V		
20	What do you think the poem dreams about?			V				
21	Do you think dreams can be realized?						V	
22	Do you agree with Langston when he says that life is like a wingless bird without dreams? Discuss!						V	
23	What do you think the poet is saying? Do you agree? Give reasons!						V	
	Total		2	6	0	4	8	3

N o	Questions	Locati on	Remem ber	Underst and	App ly	Analy ze	Evalua te	Crea te
1	Have you ever witnessed an earthquake? What effect did it have on you!	Chapt er 8	V					
2	Why are earthquake considered as the most deadly natural hazards?		V					
3	Did you notice anything specific about the way this text is written?					V		
4	What kind of text is this?					V		
	Total		2	0	0	2	0	0

## 2. Identifying data (textbook grade XI) according to Numrich's sequence

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What kind of interpersonal transaction is going on the above conversation?	Chapter 1				V			
2	What kind of interpersonal transaction is going on the above conversation?					V			
	Total		0	0	0	2	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is happening between Siti and Jane?	Chapter 2			V				
2	What kind of conversation are they having?					V			
3	Whom do you agree with, Jane or Siti? Why?							V	
4	Have you ever witnessed bullying? Describe how you felt?			V					
	Total		0	1	1	1	0	1	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Why do people write and send invitations?	Chapter 3		V					
2	Why do you think invitations have become important in our society?			V					

3	What kind of invitation do you think is in the excerpt given above? How can you say that?					V			
	Total		0	2	0	1	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is global warming?	Chapter 4			V				
2	Is it severe problem?				V				
3	What kind of text is given above?					V			
	Total		0	0	2	1	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What do you think is happening in the above conversation?	Chapter 6			V				
2	Do you think smoking is dangerous?							V	
3	Do you think it should be banned?							V	
	Total		0	0	1	0	0	2	0



10	How does this song make you feel?			V						
11	Invictus is a latin word that means unconquered. What does it say about the poem?					V				
12	Why do you think the poet is not frightened?					V				
13	Do you like the poem invictus?			V						
14	Do you agree with what the poet is saying? Why? Or why not?							V		
15	Do you think the poems can change people?							V		
16	What do you think the poem the road not taken is about?					V				
17	What might the two roads represent or symbolize? Make a list of possibilities and discuss with your partner!					V				
18	Did the poet choose between the roads? What road do you					V				



	think he chose?									
19	Do you think the poet is content with his choice? Give reasons to support your answer!					V				
20	What do you think the poem dreams about?					V				
21	Do you think dreams can be realized?			V						
22	Do you agree with Langston when he says that life is like a wingless bird without dreams? Discuss							V		
23	What do you think the poet is saying? Do you agree? Give reasons!							V		
	Total		0	4	0	11	0	6		2

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Have you ever witnessed an earthquake? What effect did it have on you!	Chapter 8		V					
2	Why are earthquake considered as the most deadly natural hazards?				V				
3	Did you notice anything specific about the way this text is written?					V			
4	What kind of text is this?					V			
	Total		0	1	1	2	0	0	0

OBS : Observing

IA : Identifying assumption

U&O : Understanding and organizing

INT : Interpreting

IF : Inquiring further

A&E : Analyzing and evaluating

MD : Making decision

### APPENDIX 3

**Analysis of the reading comprehension questions found in the textbook for grade XII based on cognitive level of Bloom's revised taxonomy (2001) and critical thinking tasks of Numrich's sequence (Beaumont, 2010)**

#### **1. Identifying and categorizing the reading comprehension questions according to Bloom's revised taxonomy (2001)**

N o	Questions	Locati on	Remem ber	Underst and	Appl y	Analy ze	Evalu ate	Crea te
1	Where do you think each of the conversations takes place?	Chapt er 4		V				
2	What are the relationships between the speakers?			V				
3	What are the functions of the italicized words?			V				
4	Where do you think each of the conversations takes place?			V				
5	What are the functions of the italicized words?			V				
	Total		0	5	0	0	0	0

N o	Questions	Locatio n	Rememb er	Understa nd	Appl y	Analyz e	Evaluat e	Creat e
1	What type of text is that?	Chapte r 5				V		
2	What do you think the text is about?			V				
3	Why do people write such a text?			V				
4	Will you someday also write the same kind of text?		V					
5	To whom is the letter sent?		V					
6	Who wrote the application letter?		V					
7	What is the purpose of writing the letter?			V				
8	What position is being advertised?		V					
9	How did Lilis Handayani know the vacancy?		V					
10	What is Lilis' current position?		V					
11	What has her current position provided with?		V					

12	What other responsibilities does she have at the moment?		V					
13	Do you think that Lilis is confident about her competence? How do you know?					V		
14	Does Lilis indicate her willingness for an interview? Find the evidence from the text			V				
	Total		8	4	0	2	0	0

N o	Questions	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	Where are zebras generally found?	Chapte r 6	V					
2	What are the most obvious characteristics of zebras?		V					
3	How can people domesticate zebras?		V					
4	What do people do to get more-easily-trained animals?		V					
5	Why can zebras adapt to African land?		V					
6	How do zebras prevent themselves from predators?		V					
7	Why are zebras called social animals?		V					
8	What are the functions of the stripes?		V					
9	What is being debated? What is the fact? Why do you think so?					V		

10	What does the last sentence mean?			V				
	Total		8	1	0	1	0	0

N o	Questions	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	What does the word tornado mean?	Chapte r 7	V					
2	What is a tornado?		V					
3	How does tornado usually turn?		V					
4	How do tornadoes look like?		V					
5	What are the other names of tornadoes?		V					
6	Why is it technically not correct to refer tornadoes as funnel clouds?		V					
7	Why is a tornado described as a twister?		V					
8	What usually		V					

	precedes a tornado?							
9	What usually accompani es a tornado?		v					
10	What does the word some in the last line refer to?			v				
	Total		9	1	0	0	0	0



N o	Questions	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	What is bullying?	Chapte r 8	V					
2	What do bullies usually do to other people?		V					
3	What is the purpose of bullying?		V					
4	How many types of bullying are?		V					
5	What differentiates one type of bullying from another?					V		
6	What are the effects of bullying?		V					
7	Which do you think is the most damaging kind of bullying?						V	
8	Why do the bullied teens fantasize of attacking the bullies?			V				
9	Why do the bullied teens seek for support to their classmates in retaliating						V	

	the bullying instead of attacking the bullies?							
10	How can retaliation cause heartbreak?			V				
11	What is the author's purpose in writing this article?					V		
12	What is the author's purpose in writing this passage?					V		
13	What general information do you get after reading the passage?			V				
14	What specific information do you get?			V				
15	What is the function of each paragraph?					V		
16	How is each paragraph related to each other?					V		
	Total		5	4	0	5	2	0

N o	Questions	Locatio n	Rememb er	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	What is the traditional community referred to in paragraph 1?	Chapte r 10	V					
2	What are the characteristics of this traditional community?		V					
3	What is the similarity between people in Baduy dalam and Baduy Luar?		V					
4	What are the differences between Baduy dalam and Baduy luar?		V					
5	What is the different atmosphere that you can sense when you enter Kaduketu?		V					
6	Is it possible to find concrete houses in Kaduketu? Why?		V					
7	What can you explore in Baduy?		V					
8	What is 'leuit'?		V					

9	Are visitors allowed to take photographs in Baduy Dalam? Why?		V					
10	What are the writer's favorite activities when she visits Baduy?		V					
11	What is the text about?			V				
12	Where do anak dalam people live?		V					
13	Where did they come from?		V					
14	What is the population?		V					
15	What are three ecological regions?		V					
16	How do they live?		V					
17	What do they usually do once a week?		V					
	Total		16	1	0	0	0	0

N o	Questions	Locatio n	Rememb er	Understa nd	Appl y	Analyz e	Evaluat e	Creat e
1	What is the news about?	Chapte r 11		V				
2	Where did it happen?		V					
3	When did it happen?		V					
4	Why did that happen?			V				
5	Who were involved in the event?		V					
6	How serious was the violation? Why do you think so?						V	
7	Are you in favor of Mr. Subagio's decision or against it? Why?						V	
8	In your opinion, what can prevent us from committing such a crime?							V
9	What is the source of the text?		V					
10	What is the text about? What is					V		

	the social function of the text?							
11	Which one is the headline? Write it down		v					
12	Why do you think living in an apartment is getting popular?						v	
13	Can you identify some regulations of living in an apartment?		v					
14	Who sets the regulations?		v					
15	Did you find any information about <b>who</b> in the text?		v					
16	Did you find any information about <b>where</b> in the text?		v					
17	Did you find any information about <b>what</b> in the text?		v					

18	Did you find any information about <i>why</i> in the text?		V					
	Total		11	2	0	1	3	1

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What is the main problem faced by the parents?	Chapter 12		V				
2	Why did the parents feel disappointed with the online system?		V					
3	Who was rejected from school due to his/her height?		V					
4	What happened to Nuraisyah Paransa's son?		V					
5	Mention some technical problems in the registration using the online system!		V					
6	Why is the online system problematic this year?			V				
7	Why do people prefer public schools to private schools?		V					



8	If you were one of the parents, what would you do to respond to some problems with the online system?							V
9	What do you think about Ahok's response to the parents' protest?		V					
10	If you were Ahok, what would you do to respond to the parents' concerns?							V
	Total		6	2	0	0	0	2

No	Questions	Location	Remember	Understand	Apply	Analyze	Evaluate	Create
1	What was the main agenda of the conference?	Chapter 13	V					
2	What was probably the main reason for holding the conference?			V				
3	Why was Surabaya selected to be the		V					

	conference venue?							
4	How important was the conference for Indonesia?						V	
5	Has Indonesia implemented the three Rs so far?			V				
6	What did Rismaharini believe to be the best municipal waste management?			V				
7	What made the mayor very convinced about her waste management?			V				
8	How did the mayor educate students to live a zero waste life?		V					
9	What do you think about the mayor's concept on municipal waste management?		V					
	Total		4	4	0	0	1	0

N o	Question s	Locatio n	Remembe r	Understan d	Appl y	Analyz e	Evaluat e	Creat e
1	What is the text about?	Chapter 15		V				
2	What is the purpose of the text?					V		
3	What parts does the text have?		V					
4	How many materials are there needed?		V					
5	How many steps are there?		V					
6	What are they?		V					
7	Do you think the steps have to be put in order? Why do you think so?				V			
8	What should we do if we want to have male or female leopard geckos?		V					
	Total		5	1	1	1	0	0

**2. Identifying and categorizing reading comprehension questions  
according to task types of Numrich's sequence**

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Where do you think each of the conversations takes place?	Chapter 4				V			
2	What are the relationships between the speakers?					V			
3	What are the functions of the italicized words?					V			
4	Where do you think each of the conversations takes place?					V			
5	What are the functions of the italicized words?					V			
	Total		0	0	0	5	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What type of text is that?	Chapter 5				V			
2	What do you think the text is about?				V				
3	Why do people write such a text?					V			
4	Will you someday also write the same kind of text?			V					
5	To whom is the letter sent?				V				
6	Who wrote the application letter?				V				
7	What is the purpose of writing the letter?					V			
8	What position is being advertised?				V				
9	How did Lilis Handayani know the vacancy?				V				
10	What is Lilis' current position?				V				
11	What has her current position provided with?				V				
12	What other responsibilities does she have at the moment?				V				
13	Do you think that Lilis is confident about her competence? How do you know?					V			

14	Does Lilis indicate her willingness for an interview? Find the evidence from the text					V			
	Total		0	1	8	5	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	Where are zebras generally found?	Chapter 6			V				
2	What are the most obvious characteristics of zebras?				V				
3	How can people domesticate zebras?				V				
4	What do people do to get more-easily-trained animals?				V				
5	Why can zebras adapt to African land?				V				
6	How do zebras prevent themselves from predators?				V				
7	Why are zebras called social animals?				V				
8	What are the functions of the stripes?				V				
9	What is being debated? What is the fact? Why do you think so?							V	
10	What does the last sentence mean?					V			
	Total		0	0	8	1	0	1	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What does the word tornado mean?	Chapter 7			V				
2	What is a tornado?				V				
3	How does tornado usually turn?				V				
4	How do tornadoes look like?				V				
5	What are the other names of tornadoes?				V				
6	Why is it technically not correct to refer tornadoes as funnel clouds?				V				
7	Why is a tornado described as a twister?				V				
8	What usually precedes a tornado?				V				
9	What usually accompanies a tornado?				V				
10	What does the word some in the last line refer to?					V			
	Total		0	0	9	1	0	0	0



No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is bullying?	Chapter 8			V				
2	What do bullies usually do to other people?				V				
3	What is the purpose of bullying?				V				
4	How many types of bullying are?				V				
5	What differentiates one type of bullying from another?				V				
6	What are the effects of bullying?				V				
7	Which do you think is the most damaging kind of bullying?							V	
8	Why do the bullied teens fantasize of attacking the bullies?				V				
9	Why do the bullied teens seek for support to their classmates in retaliating the bullying instead of attacking the bullies?							V	
10	How can retaliation cause heartbreak?							V	
11	What is the author's purpose in writing this article?					V			
12	What is the author's purpose in writing this passage?					V			
13	What general information do you get after reading the passage?				V				

14	What specific information do you get?				V				
15	What is the function of each paragraph?					V			
16	How is each paragraph related to each other?				V				
	Total		0	0	10	3	0	3	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is the traditional community referred to in paragraph 1?	Chapter 10			V				
2	What are the characteristics of this traditional community?				V				
3	What is the similarity between people in Baduy dalam and Baduy Luar?				V				
4	What are the differences between Baduy dalam and Baduy luar?				V				
5	What is the different atmosphere that you can sense when you enter Kaduketu?				V				
6	Is it possible to find concrete houses in Kaduketu? Why?				V				
7	What can you explore in Baduy?				V				
8	What is 'leuit'?				V				
9	Are visitors allowed to take photographs in Baduy Dalam? Why?				V				
10	What are the writer's favorite activities when she visits Baduy?				V				
11	What is the text about?				V				
12	Where do anak dalam people live?				V				
13	Where did they come from?				V				

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
14	What is the population?				V				
15	What are three ecological regions?				V				
16	How do they live?				V				
17	What do they usually do once a week?				V				
	Total		0	0	17	0	0	0	0

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is the news about?	Chapter 11			V				
2	Where did it happen?				V				
3	When did it happen?				V				
4	Why did that happen?				V				
5	Who were involved in the event?				V				
6	How serious was the violation? Why do you think so?							V	
7	Are you in favor of Mr. Subagio's decision or against it? Why?							V	
8	In your opinion, what can prevent us from committing such a crime?								V
9	What is the source of the text?				V				
10	What is the text about? What is the social function of the text?					V			
11	Which one is the headline? Write it down				V				
12	Why do you think living in an apartment is getting popular?							V	
13	Can you identify some regulations of living in an apartment?			V					
14	Who sets the regulations?				V				

15	Did you find any information about <i>who</i> in the text?				V				
16	Did you find any information about <i>where</i> in the text?				V				
17	Did you find any information about <i>what</i> in the text?				V				
18	Did you find any information about <i>why</i> in the text?				V				
	Total		0	1	12	1	0	3	1

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is the main problem faced by the parents?	Chapter 12			V				
2	Why did the parents feel disappointed with the online system?				V				
3	Who was rejected from school due to his/her height?				V				
4	What happened to Nuraisyah Paransa's son?				V				
5	Mention some technical problems in the registration using the online system!				V				
6	Why is the online system problematic this year?				V				
7	Why do people prefer public schools to private schools?				V				
8	If you were one of the parents, what would you do to respond to some problems with the online system?								V
9	What do you think about Ahok's response to the parents' protest?			V					
10	If you were Ahok, what would you do to respond to the parents' concerns?								V
	Total		0	1	7	0	0	0	2

No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What was the main agenda of the conference?	Chapter 13			V				
2	What was probably the main reason for holding the conference?					V			
3	Why was Surabaya selected to be the conference venue?				V				
4	How important was the conference for Indonesia?							V	
5	Has Indonesia implemented the three Rs so far?					V			
6	What did Rismaharini believe to be the best municipal waste management?					V			
7	What made the mayor very convinced about her waste management?					V			
8	How did the mayor educate students to live a zero waste life?				V				
9	What do you think about the mayor's concept on municipal waste management?			V					
	Total		0	1	3	4	0	1	0



No	Questions	Location	OBS	IA	U&O	INT	IF	A&E	MD
1	What is the text about?	Chapter 15			V				
2	What is the purpose of the text?					V			
3	What parts does the text have?				V				
4	How many materials are there needed?				V				
5	How many steps are there?				V				
6	What are they?				V				
7	Do you think the steps have to be put in order? Why do you think so?					V			
8	What should we do if we want to have male or female leopard geckos?				V				
	Total		0	0	6	2	0	0	0

OBS : Observing

IA : Identifying assumption

U&O : Understanding and organizing

INT : Interpreting

IF : Inquiring further

A&E : Analyzing and evaluating

MD : Making decision

#### APPENDIX 4

### QUESTIONNAIRE ON ENGLISH TEACHERS' PERSPECTIVES ON THE IMPLEMENTATION OF HOTS

Teacher 1 (Mr. Heru Purwanto)

No	Questions	Respond
1	It is important to introduce HOTS to the students	Strongly agree
2	It is important to develop HOTS in English textbook	Agree
3	It is important to implement HOTS in exercises for students	Strongly agree
4	It is important to realize HOTS in teaching reading	Agree
5	It is important to include HOTS in reading exercises	Agree
6	It is important to create HOTS-based questions in reading comprehension questions	Strongly agree
7	Realizing HOTS in reading comprehension questions could enhance students' critical thinking	Strongly agree
8	HOTS are well-treated in reading comprehension questions in English textbooks produced by ministry of education and culture	Moderately agree

Teacher 2 (Mrs. Kusumandari)

No	Questions	Respond
1	It is important to introduce HOTS to the students	Strongly agree
2	It is important to develop HOTS in English textbook	Agree
3	It is important to implement HOTS in exercises for students	Strongly agree
4	It is important to realize HOTS in teaching reading	Agree
5	It is important to include HOTS in reading exercises	Strongly agree
6	It is important to create HOTS-based questions in reading comprehension questions	Strongly agree
7	Realizing HOTS in reading comprehension questions could enhance students' critical thinking	Agree
8	HOTS are well-treated in reading comprehension questions in English textbooks produced by ministry of education and culture	Moderately agree