

CHAPTER I INTRODUCTION

A. Research Background

In the 21st century, the development of science and technology is growing rapidly. It is because it has produced increasingly sophisticated technologies and innovations that appear daily. This development affects several aspects of life, including the aspect of education. As stated by Tondeur et al., digital technology has now begun to be used in education to support learning, either as information or a learning tool.¹ As an information tool, for example, in this day, educators and students can search and find various information about knowledge quickly through the internet network. In this case, everyone must be careful in receiving the information obtained. In addition, educators must strive to train and develop the skills possessed by students as capital to face developments in the 21st century.

The skills that must be mastered in the 21st century are called *21st Century Skills*. These skills are needed by every individual for their holistic development to contribute to the progress and development of the nation/world. National Education Association states that in *21st Century Skills*, four special skills are most important and need to be equipped for each individual, which is then known as the “4Cs”, namely critical thinking, communication, collaboration, and creativity.² Corinne Martinez revealed that education systems worldwide must develop a framework emphasizing developing *soft skills* such as critical thinking, problem-solving, creativity, and digital technology needed for success in the 21st Century.³ For this reason, in the 21st century, educational institutions in every

¹ Tondeur, Van Braak, and Valcke, “Towards a Typology of Computer Use in Primary Education.” *Journal of Computer Assisted Learning*, Vol. 23, no. 3, (2007): 198, <https://doi.org/10.1111/j.1365-2729.2006.00205.x>.

² NEA, “Preparing 21st Century Students for a Global Society: An Educator’s Guide to the “ Four Cs ” Great Public Schools for Every Student.” National Education Association, (2011), 3.

³ Martinez, “Developing 21st Century Teaching Skills: A Case Study of Teaching and Learning through Project-Based Curriculum.” *Cogent Education* 9, no. 1, (2022): 2, <https://doi.org/10.1080/2331186X.2021.2024936>.

country are not only required to improve the quality of their education in terms of knowledge but also very much needed to teach soft skills to their students.

To improve the quality of education, Indonesia evaluates or measures the quality of education (*benchmark*) at an international standard. Several ways include participating in international studies through the *Trends in International Mathematics and Science Study (TIMSS)* and *Program for International Student Assessment (PISA)*. TIMSS is an international assessment to measure students' grades 4 and 8 achievements in mathematics and science.⁴ Meanwhile, PISA is an international standard assessment measuring basic literacy levels, such as reading, mathematics, and science, for students aged 15.⁵ The evaluation results from TIMSS in 2015 and PISA in 2018 show that Indonesia ranks low in reading literacy, mathematics, and science compared to other countries.⁶ The low evaluation rating in Indonesia is because students are given more questions that test aspects of memory/memorization and the lack of learning that emphasizes reasoning abilities. Today's learning develops *lower-order thinking skills (LOTS)* and less the application of *higher-order thinking skills (HOTS)*, such as analyzing a problem and finding a solution. That is what causes the quality of education in Indonesia to lag.

To catch up on the quality of education in Indonesia, the Ministry of Education and Culture, through the Directorate General of Teachers and Education Personnel (Ditjen GTK), created a learning development program oriented towards higher-order thinking skills (HOTS).⁷ Applying Higher Order Thinking Skills in the learning process is expected to improve academic achievement and student integrity in the 21st century. In addition, the government hopes to produce superior and

⁴ Martin and Mullis, *TIMSS 2019 Assessment Frameworks*, (TIMSS & PIRLS International Study Center, Lynch School of Education, Boston College, and International Association for the Evaluation of Educational Achievement, 2019), 3.

⁵ Nur'aini et al., "Meningkatkan Kemampuan Literasi Dasar Siswa Indonesia Berdasarkan Analisis Data PISA 2018." No. 3, (2021), 2.

⁶ Setiawati et al., *Buku Penilaian Berorientasi Higher Order Thinking Skill*, (2019), 1.

⁷ Ariyana et al., "Buku Pegangan Pembelajaran Keterampilan Berpikir Tingkat Tinggi Berbasis Zonasi." (2018), 2.

productive human resources in facing developments in the era of global competition. Similar to what was expressed by Keshta claims that higher-order thinking skills are needed to create productive citizens because productivity is based on the ability of each individual to argue, discuss, evaluate, and connect some knowledge from different sources.⁸

Resnick defines higher-order thinking skills as a complex process of explaining the material, drawing inferences, constructing expressions, analyzing and building relationships, including the most basic mental activities.⁹ Higher-order thinking skills based on Bloom's taxonomy revised by Anderson and Krathwohl are referred to as the cognitive dimension, higher-order thinking skills are reflected at the top three levels, which include analyzing, evaluating, and creating.¹⁰ Meanwhile, according to Brookhart, the definition of higher-order thinking skills can be interpreted into three categories: transfer, critical thinking, and problem-solving.¹¹ From the definitions above, it can be concluded that higher-order thinking skills are a way of thinking that not only exercises intellectual abilities in memorizing but at a higher level than memorizing, such as applying memorized material in evaluating, analyzing, and solving a problem critically and creatively.

The implementation of higher-order thinking skills (HOTS) in learning fits perfectly with the rules of the Kurikulum Merdeka Belajar – Kampus Merdeka (MBKM Curriculum) or *Freedom to Learn*. The MBKM curriculum is a new policy program initiated by the Ministry of Education and Culture of the Republic of Indonesia, which aims to create superior human resources and improve the quality of education

⁸ Keshta and Seif, "Evaluating the Higher Order Thinking Skills in Reading of English for Palestine Grade Eight." *Asian Journal of Education and e-Learning*, Vol. 01, no. 1, (2013): 48, <https://ajournalonline.com/index.php/AJEEL/article/view/52>.

⁹ Resnick, *Education and Learning to Think*. (Washington DC: National Academy Press, 1987), 45.

¹⁰ Anderson and Krathwohl, *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. (New York: Addison Wesley Longman Inc, 2001), 5.

¹¹ Brookhart, *How to Assess Higher-Order Thinking Skills in Your Classroom*. (United States of Amerika: ASCD, 2010), 3.

in Indonesia. The MBKM curriculum consists of two concepts in a program; “Merdeka Belajar” and “Kampus Merdeka.”¹² The meaning of “Merdeka Belajar” is freedom in thinking and freedom to innovate. This policy is intended for primary and secondary education. Meanwhile, the Kampus Merdeka continues the Merdeka Belajar program aimed at higher education.

The learning system in the Merdeka Curriculum is student-centered. This curriculum emphasizes the abilities and characteristics possessed by students. The ability concerns thinking critically, observing the environment, and making decisions in complex situations. So, it can be said that Higher Order Thinking Skills have an important role in implementing learning from the Independent Curriculum. Higher Order Thinking Skills has a vision and mission almost the same as the Merdeka Curriculum in educational development: to make students more active in the educational process and not just passive in receiving lessons.

In line with what was expressed by Mayer, the grouping of higher-order thinking skills is based on a vision of learning that is more developed than just acquiring knowledge but also being able to apply knowledge in new contexts.¹³ For example, when students face different types of problems daily, they will be accustomed to strategizing and finding the best solutions based on their knowledge and experience. Thus, higher-order thinking skills will be very useful for students’ daily lives.

Students’ ability in higher-order thinking can be trained but must be supported by providing questions and material supporting HOTS. One way is to use the reading text and questions from the reading because reading is the most complex skill closely related to higher-order thinking skills. At the same time, reading activities require a high understanding to analyze and interpret the reading content. Understanding of a text can be

¹² Vhalery, Setyastanto, and Leksono, “Kurikulum Merdeka Belajar Kampus Merdeka: Sebuah Kajian Literatur.” *Research and Development Journal of Education*, Vol. 8, no. 1, (2022), 186-188.

¹³ Mayer, “Rote Versus Meaningful Learning.” *Theory into Practice*, Vol. 41, no. 4 (2002), 1.

assessed by providing questions in the reading text.¹⁴ Airasian and Russel (2008, as cited in Ruhin Hidayat 2019) argue that essay questions are the only way to assess higher-order thinking skills. Then they said, “In essay questions, there is an important tool in assessing higher-order thinking.”¹⁵ When a student is presented with a reading text and HOTS questions, students will apply their insights and creative thinking to understand the text they are reading and construct a unique response in answering.

Evaluating students’ understanding of the text they have read can be measured using the CEFR (Common European Framework of Reference). The CEFR is an internationally recognized standard for describing language proficiency in reading, writing, listening, and speaking. For reading comprehension, the CEFR is designed to assess reading and comprehension skills on various topics, including correspondence reading, instructional reading, introductory reading, information-seeking reading, and reasoning skills. CEFR divides foreign language competence into six levels which can be grouped into three broad categories, namely Basic User (A1, A2), Independent User (B1, B2), and Proficient User (C1, C2).¹⁶ The existence of standardization like this will help *stakeholders* to see a person’s language qualifications.

Several researchers have carried out research on Higher order thinking skills in reading. In 2013, Awad Sulaiman conducted research that evaluated the availability of higher-order thinking skills in reading exercises in grade 8 English textbooks for Palestine.¹⁷ Furthermore, in 2016 Zaharil Anasy

¹⁴ Daniati and Fitrawati, “High Order Thinking Skill Questions in Reading Exercises (An Analysis of Reading Exercises in Bright an English Course Book for the Grade IX of Junior High School, Published by Erlangga in 2018).” *Journal of English Language Teaching*, Vol. 9, no. 2, (2020): 369, <http://ejournal.unp.ac.id/index.php/jelt>.

¹⁵ Ahmad Ruhin Hidayat, “The Analysis of Higher Order Thinking Skill Implementation in English Reading Textbook.” *Journal of Research on Applied Linguistics Language and Language Teaching*, Vol. 2, no. 1, (2019), 2.

¹⁶ Council of Europe, “Common European Framework of Reference for Languages: Learning, Teaching, Assessment Companion Volume with New Descriptors.” (2018), 34.

¹⁷ Keshta and Seif, “Evaluating the Higher Order Thinking Skills in Reading of English for Palestine Grade Eight.” *Asian Journal of Education and e-Learning*, Vol. 01, no. 1, (2013).

researched the analysis of the distribution of higher-order thinking skills in reading exercises in the textbook *Pathway to English* for grade 11 students.¹⁸ In 2019, Ahmad Ruhin Hidayat researched the types and uses of High Order Thinking Skills, often used in reading essay exercises in English textbooks.¹⁹ Furthermore, in 2020 Nadia Daniati and Fitrawati tried to research the analysis of HOTS questions in reading exercises in the book *Bright an English Course Book for Grade IX Junior High School*.²⁰ In 2020, Rezita Ayu Febriyani researched the composition of HOTS questions and explained the dominant cognitive dimension in the instructional questions in the English textbook “English SMA/MA/SMK/MAK Class XII Revised Edition 2018”.²¹ Some studies focus on implementing HOTS (Higher Order Thinking Skills) in English textbooks. The researcher above proved that the availability of higher-order thinking skills in English textbooks does not fully provide questions about higher-order thinking skills.

However, based on the previous research above, no research has been conducted to analyze the distribution of high-order thinking skills in the English exam questions in Indonesia, especially those issued by the Islamic educational organization in Jepara for the academic year 2022/2023. Therefore, the researcher strongly believes this research is significant to the study. In this study, the researcher used the revised edition of Bloom’s Taxonomy with three dimensions by Anderson and Krathwohl to analyze Higher Order Thinking Skills. The purpose of this study was to analyze the level of HOTS questions in the English exam questions issued by the Islamic

¹⁸ Anasy, “HOTS (Higher Order Thinking Skill) in Reading Exercise.” *TARBIYA: Journal of Education in Muslim Society*, Vol. 3, no. 1, (2016), <http://dx.doi.org/10.15408/tjems.v3i1.3886>.

¹⁹ Ahmad Ruhin Hidayat, “The Analysis of Higher Order Thinking Skill Implementation in English Reading Textbook.” *Journal of Research on Applied Linguistics Language and Language Teaching*, Vol. 2, no. 1, (2019).

²⁰ Daniati and Fitrawati, “High Order Thinking Skill Questions in Reading Exercises (An Analysis of Reading Exercises in *Bright an English Course Book for the Grade IX of Junior High School*, Published by Erlangga in 2018).” *Journal of English Language Teaching*, Vol. 9, no. 2, (2020).

²¹ Febriyani, “An Analysis on Higher Order Thinking Skill (HOTS) in Compulsory English Textbook for the Twelfth Grade of Indonesian Senior High Schools.” *English Education Journal (EEJ)*, Vol. 10, no. 1, (2019).

educational organization in Jepara based on the revised edition of Bloom Taxonomy and CEFR. Thus, the researcher is interested in conducting research titled “**Representation of Higher Order Thinking Skills in Reading Comprehension Questions Issued by The Islamic Educational Organization in Jepara.**”

B. Research Focus and Scope

This research is limited to the HOTS analysis in the English exam questions for Grades 10, 11, and 12 senior high schools issued by the Islamic educational organization in Jepara for the academic year 2022/2023. The researcher will only focus on reading questions because students can explore the information in the reading text and gain broader insights, so this can exercise students' abilities in higher-order thinking well. The questions were analyzed based on the HOTS level of the cognitive domain, which refers to the revised (three-dimensional) edition of Bloom's taxonomy from Anderson and Krathwohl, which consists of analyzing skills (C4), evaluating (C5), and creating (C6).²²

C. Research Problems

Based on the identification and limitation of the problems described above, the researcher formulates the problem as follows:

1. Are there any representations of the Higher Order Thinking Skills that appeared in the English exam questions, especially the reading section issued by the Islamic educational organization in Jepara in 2022?
2. How can those questions constructed in the English exam be considered/included as Higher Order Thinking Skills questions?

D. Research Objectives

In line with the formulation of the problem above, the objectives of this study are:

²² Ariyana et al., *Buku Pegangan Pembelajaran Keterampilan Berpikir Tingkat Tinggi Berbasis Zonasi*. (2018), 5.

1. To investigate the availability of higher-order thinking skills in English exam questions issued by the Islamic educational organization in Jepara in 2022.
2. To explain the reason why those questions are considered or categorized as Higher Order Thinking Skills questions.

E. Research Significances

The results of this study are expected to provide benefits and contributions to the world of education, both theoretically and practically, as follows:

1. Theoretical Significance

Theoretically, this research will provide insight into higher-order thinking skills (HOTS) in reading comprehension questions. More than that, the results of this research can also be criticized, suggested, and evaluated for the Islamic educational organization in Jepara.

2. Practical Significance

Practically, the researcher hopes that this research will be useful for:

a) For Researcher

This research is useful for the researcher because it can increase knowledge in analyzing questions about higher-order thinking skills and the existing levels of higher-order thinking skills.

b) For Exam Makers

The results of this study are expected to be an evaluation and consideration material for exam makers of English language exam (the Islamic educational organization in Jepara) to pay attention to the Higher Order Thinking skill component in making exam questions.

c) For Policymakers

The researcher suggests that the current curriculum has not been transformed into questions that follow the curriculum guidelines. So the policymakers must ensure that the question maker follows the rules of the curriculum.

d) For Future Researchers

The researcher hopes that this research can become a reference for future researchers and develop more in-

depth research on analyzing higher-order thinking skills in English questions, especially reading skills.

F. Definition of Key Term

To avoid misunderstandings in the interpretation of meaning, the researcher tries to describe the terms that are relevant to this research:

1. Representation

Representation is a process of generating meaning from a concept in our minds through language. The relationship between concepts and language allows us to interpret something that refers to real or fictional objects, people, and events.²³

2. Higher Order Thinking Skills

Higher-order thinking skills are complex processes that involve explaining content, drawing inferences, constructing acceptable expressions, analyzing and building relationships, and involving the most basic mental activities.²⁴ In short, HOTS is the ability to think at a higher level.

3. Reading Comprehension

Reading is translating written form to obtain and understand the information and knowledge readers need.²⁵ Comprehension is the process of connecting what we read with knowledge. Reading comprehension is an activity to understand and relate all reading texts to previous knowledge. Readers will be considered to get information or knowledge in a text if they understand what they read.

4. Merdeka Belajar Curriculum

Merdeka Curriculum is a curriculum with diverse learning. Merdeka Curriculum focuses on essential content so students have enough time to explore concepts and strengthen competence.²⁶ The curriculum or Merdeka Belajar program

²³ Stuart Hall, *The Work of Representation*. (London: SAGE Publications, 1997), 17.

²⁴ Resnick, *Education and Learning to Think*. (Washington DC: National Academy Press, 1987), 45.

²⁵ Nurdiana and Rizki Amelia, *Interpretive Reading*. (Pekanbaru: Kreasi Edukasi, 2017), 1.

²⁶ Nurani et al., *Buku Saku Edisi Serba-Serbi Kurikulum Merdeka Kekhasan Sekolah Dasar*. (2022), 2.

was launched by the Ministry of Education, Culture, Research, and Technology (Mendikbud Ristek) Nadiem Makarim to evaluate the improvement of the 2013 curriculum.

G. Organization of Thesis

Writing systematics is useful for providing a clear picture and not deviating from the proposal's subject matter. The Systematics of this thesis is as follows:

Chapter I is an introduction.

This chapter explains the background of the research, the research focus and scope, the problems to be researched, the research objectives, the significance of the research, the definition of key terms, and the systematics of writing.

Chapter II is a review of related literature.

This chapter describes the theoretical basis relevant to the research discussed, previous research, and the theoretical framework.

Chapter III is a research methodology.

This chapter describes the method or type of approach used, research settings, subjects or participants in research, data collection techniques, research data validity, and data analysis techniques.

Chapter IV is the findings and discussion.

This chapter contains the research results and a discussion or explanation of the data analysis.

Chapter V is conclusions and recommendations.

As the last chapter, this chapter will summarize a brief conclusion obtained from the discussion and also contains suggestions for the development of further research.