



## AN ANALYSIS OF ENGLISH ACHIEVEMENT IN FINAL TEST BASED ON REVISED BLOOM'S TAXONOMY IN THE 8<sup>TH</sup> GRADE OF SMP NEGERI 14 MATARAM

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**Abstract:** This study was conducted to find out the cognitive level that was achieved in the final test issued by the Education Office of Mataram and to find out students' achievement in the final test based on Revised Bloom's Cognitive Taxonomy. The population of this study was 269 students in the eighth grade of SMP Negeri 14 Mataram in the Academic Year 2021/2022 and 41 students were taken as the sample of this study by using simple random sampling. The data was obtained by collecting and analyzing the final test items and students' answer sheets. There are 12 questions or 30% of C1 (remembering), 16 or 40% of C2 (understanding), 3 or 7.5% of C3 (applying), and 9 or 22.5% of C4 (analyzing). In essay test items, there are 3 or 60% of C1 (remembering) and 2 or 40% of C2 (understanding). In addition, the mean score of students' total correct answers in the final test items was 18.08, SD = 6.97. The median was 19 and the modus was 20. On average, students' achievement in answering the final test items was sufficient (42.46%). Therefore, it implied that the test items were less well-distributed since the LOTS questions were dominant and the students need to practice more to improve their scores and sharpen their other cognitive skills.

**Keywords:** Test Items, Revised Bloom's Cognitive Taxonomy, Students' Achievement

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### INTRODUCTION

A teacher holds many roles to conduct teaching and learning activities. There are three essential roles of a teacher: being a planner, an executor, and an assessor. Being a planner means that teachers should design a plan for their teaching activities. A teacher has to arrange and improve teaching and learning document based on the current curriculum (K-13) s implemented in Indonesia. Sofiana, Mubarok, & Yuliasri (2019) stated that in ELT K-13, a lesson plan should involve the core competencies, including spiritual attitudes, social attitudes, knowledge, and skills. Thohir, Amrullah, Udin, & Putera (2020) emphasize that the learning objectives in K-13 should be able to help students prepare themselves to solve problems in the current era or known as the 21<sup>st</sup> century. Being an executor means teachers conduct the teaching activities based on what they have planned before starting the class. Following those roles, being an assessor means that teachers should assess their students in order to find out what materials have been achieved by students and what materials need to

be improved for future instructions. Thus, assessment is an essential thing that should be conducted by teachers in their classes.

According to Brown & Abeywickrama (2019), assessment is conducted through teaching and learning processes that involve how students respond to a question, offer a comment, and try a new word or structure. They also state that there are two kinds of assessment based on their functions: formative assessment and summative assessment. Formative assessment is conducted during the teaching and learning activities to build students' competencies without giving a mark on a purpose. On the other hand, summative assessment is in accordance with the assessment of learning due to it happens after the instructions have occurred, this kind of assessment is also used to decide and make statements about students learning status of ability at a certain time (Chen & Fox, 2017). Afriadi, Arifuddin, & Nuriadi (2021) emphasize that assessment is not only about asking students what they have learned and how they use it in real life but it is also about how students learned and are supposed to learn something that relevant to knowledge. Sujana et al. (2020) emphasize that assessment in the instructions process is not only to measure learning achievement (summative function) but also to increase the learning process (formative function). Hanafi et al. (2021) also emphasize the characteristic of summative assessment is conducted as the summary of students' abilities after having finished all materials.

There are three domains introduced by Bloom in 1956, one of them is a cognitive domain (Anderson et al., 2001). This domain is one of the most important domains that can be assessed by teachers by giving a test. The Cognitive domain that has been revised by Anderson et al. (2001) are (1) remembering, (2) understanding, (3) applying, (4) analyzing, (5) evaluating, and (6) creating. Cited in Thoifah (2021) that Pusat Asesmen Pembelajaran (Pusmenjar) the ministry of education and culture classifies the cognitive level into three levels i.e. remembering (C1) and knowledge (C2) into L1, applying (C3) into L2, and analyzing (C4), evaluating (C5), and creating (C6) into L3. According to Yuliatin, Thohir, & Arafiq (2019) critical thinking and problem solving or known as complex judgmental skills are involved in HOTS (Higher Order Thinking) while LOTS (Lower Order Thinking) is used as the base requirement skill to move into HOTS (Higher Order Thinking).

Due to the spreading of Covid-19, The Ministry of Education and Culture issued a pandemic emergency curriculum (*Kurikulum Darurat Pandemi*) this curriculum has been simplified to be adjusted to the current situation in order to support teaching and learning activities. The Ministry of Education and Culture, Nadiem Anwar Makarim stated "The curriculum of education units on certain occasions permits the flexibility for schools to choose a curriculum that suits students' needs in learning and teaching activities." (Kemendikbud, 2020). According to the Circular Letter of The Ministry of Education and Culture number 1 about the nullification of the National Examination and Equivalence Test (*Ujian Kesetaraan*) and the implementation of School-based Examination (*Ujian Sekolah*) during the emergency of Corona Virus Disease (Covid-19) spreading stated in decision number 1 that National Examination and Equivalence Test (*Ujian Kesetaraan*) is abolished. Following the decision number 3 letter c, students are declared to be graduated from Education Unit after following the examination held by Education Unit.

Assessment is an essential thing to be conducted to report students' achievement in English lessons because the assessment takes a role as one of the students' grade promotion requirements. Thus, it is important to investigate the distribution of the test items. This study takes place in SMP Negeri 14 Mataram in eighth grade and aims to find out students' achievement by analyzing the final test items made by the Education Office of Mataram. The final test was issued by the Education Office of Mataram from the MGMP (*Musyawarah Guru Mata Pelajaran*) which has been elected by the Education Office of Mataram. Then, this study is aimed to analyze students' final test answers according to Revised Bloom's Cognitive Taxonomy.

## RESEARCH METHODS

This study is a descriptive quantitative design. The aim is to understand the data in depth. A descriptive method is used to investigate the real phenomenon occurring in the surrounding. According to Arikunto (2014), the descriptive method is a research method that investigates the real circumstances of a certain area without giving a treatment. This study aimed to investigate and inform the real circumstances that happened in an instruction thus the descriptive method is an appropriate method to be used to describe the phenomenon that occurred. In addition, a quantitative method is used to draw a conclusion using numeric percentages. This study was conducted in SMP Negeri 14 Mataram. The population of this study was 269 students in eighth grade and 41 students were taken as the sample by using simple random sampling. The data was collected by using documentation data collection. The source of the data is the final test items issued by The Education Office of Mataram, students' final answer sheets, and the blueprint of test items. There were four research instruments in this study: research instrument for multiple-choice questions and essay test items, research instrument for students' answers to multiple-choice, and essay test items. Finally, the data were analyzed using Microsoft Excel's assistance to find out the mean, standard deviation, median and modus, and percentage formula. The result was described in the findings and discussions.

## FINDINGS AND DISCUSSIONS

The findings of this study are shown in the table below:

Table 1. The distribution of Cognitive Level in the test items

NO	Revised Bloom's Cognitive Taxonomy	Level	Multiple-Choice Questions	Essay Test Items
1	C1 (remembering)	L1	12 (30%)	3 (60%)
2	C2 (understanding)		16 (40%)	2 (40%)
3	C3 (applying)	L2	3 (7.5%)	-
4	C4 (analyzing)	L3	9 (22.5%)	-
5	C5 (evaluating)		-	-
6	C6 (creating)		-	-

The table above shows the distribution of cognitive levels in the final test items issued by the Education Office of Mataram. In multiple-choice questions, there are 12 (30%) questions of C1 (remembering), the example of the question: Where is the waterfall located? (Question number 1), the question is categorized into C1 (remembering) because the question "what" indicates to recall students' memory after reading the text. There are 16 (40%) questions of

C2 (understanding), the example of the questions: Based on the text above, we know that the writer... (Question number 7), the question is categorized as the C2 (understanding) since the students need to understand the text in order to be able to summarize what the text is about. There are 3 (7.5%) questions of C3 (applying), the example of the question: Zarril: Hi Beni! I've heard that you got accidents two days ago. Beni: Yes, that's right. Zarril: What a pity! .....? Beni: It happened on the way to Alif's house. When I was going to cross the street, suddenly a car hit me from beside. Luckily Ridho grabbed my hand quickly. (Question number 17), the question is categorized as the C3 (applying) because the students are asked to fill in the dialogue by applying the correct sentence. There are 9 (22.5%) of C4 (analyzing), the example of the question: "It made us exhausted". This sentence describes that the way to the waterfall is... (Question number 3), the question is categorized as C4 (analyzing) because the students should be able to analyze what the sentence in the quotation marks implies. In addition, in essay test items, there are 3 (60%) questions of C1 (remembering), the example of the question: What did they enjoy at Jimbaran beach? (Question 42), the question "what" indicates to recall students' memory after reading the text which means that the question is C1 (remembering). There are 2 (40%) questions of C2 (understanding), here is the example: How did the writer and family go to Bali? (Question number 41). It showed that the students are asked to infer what vehicle the writer and family use to go to Bali. Thus, this question is at C2 level (understanding).

This study showed the distribution of cognitive levels in the final test, thus it implied that the final test issued by the Education Office of Mataram was in LOTS (lower-order thinking). Referring to the operational verbs, basic competency 3 (*Pengetahuan*) in the pandemic emergency curriculum for the second semester. It is displayed that in basic competency 3.3 and 3.4 consist of C2 (*membandingkan*) and C5 (*menafsirkan*) since those basic competencies encourage students to be able to compare (recount text material) and interpret (song material). Thus, to be able to interpret a lyric of a song, the students need to acquire those previous four cognitive levels of Bloom's Revised Taxonomy. Therefore, it meant that the test items did not cover all those two basic competencies for the second semester and the distribution was less well-distributed due to the LOTS questions were more dominant than the HOTS questions. This is in accordance with the study of Syahdanis, Sofyan, & Yunita (2021). They found that the distribution of HOTS questions was in the lowest category or there were 0% questions of HOTS in the tenth grade and 10% questions of HOTS questions in the eleventh grade of Senior High School number 6 in Bengkulu City. Moreover, there were 6% of HOTS questions in the tenth grade and 20% of HOTS questions in the eleventh grade of Senior High School number 11 in Bengkulu City. Meanwhile, MOTS (middle-order thinking skills) questions were the highest distribution of the teacher-made test. In addition, Amaliyah (2018) also found in her study that there were no HOTS questions in the teacher-made test. She found that the teacher-made test consists of 2 questions of C1 (remembering), 26 questions of C2 (understanding), and 6 questions of C3 (applying) which mean that the test items was at the LOTS level.

In addition, a mini-interview was conducted to discuss the result of the final test items analysis with the teacher. Based on the mini-interview, there are 3 questions that are different from the blueprint. The first is question number 19, it is stated in the blueprint that the

question is in L3 (*Penalaran*) but it is displayed in the test items that students are asked to fill in the blank using correct conjunction thus it is categorized into C3 (applying) or L2 (*Aplikasi*). The second is question number 24, it is stated in the blueprint that the question is in L3 (*Penalaran*) but the question asks students to infer the closest meaning of the word thus, this question is categorized into C2 (understanding) or L1 (*Pengetahuan dan Pemahaman*). The third question is number 37, the question asks students the title of the song and it is categorized into L3 (*Penalaran*) but since the lyrics of the song already existed in the seventh-grade textbook thus this question is categorized into C1 (remembering) or L1 (*Pengetahuan dan Pemahaman*) since the students are asked to recall their memory to the previous instructions.

Additionally, a misconception was also found in the test items. It is displayed in the final test that there is an essay test. However, the term ‘essay’ was misleading since the questions were asked students to answer the questions based on the text that was given thus it should be open-ended questions.

Table 2. The percentage of students’ total correct answers in the test items

NO	Revised Bloom’s Cognitive Taxonomy	Multiple-Choice Questions	Essay Test Items
1	C1 (remembering)	45.53%	62.6%
2	C2 (understanding)	46.49%	25.61%
3	C3 (applying)	35.77%	-
4	C4 (analyzing)	38.75%	-
5	C5 (evaluating)	-	-
6	C6 (creating)	-	-

The table above shows the distribution of students’ total answers to the test items at each level. In essay test items, the data was gained by cross-checking students’ answer sheets to the answer key and giving 1 as a mark if the answer is totally correct (given 4 as the score by the teacher). Additionally, in multiple choice questions, C1 (remembering) = 45.53%, C2 (understanding) = 46.49%, C3 (applying) = 35.77% and C4 (analyzing) = 38.75%. In addition, in essay test items, there is 62.6% for C1 (remembering) and 25.61% for C2 (understanding) questions.

In multiple-choice and essay test items, it was difficult for students to answer question number 3 (multiple-choice question) and 41 (essay test items), in the questions, the students were asked to analyze the meaning of the sentence in the quotation marks. They were also difficult to answer question number 41 in which the students were asked to infer what vehicle was used by the writer and family to go to Bali due to the vehicle or transportation did not mention directly in the text. It meant that the students need to practice more in order to improve their scores to a certain level and to sharpen their other cognitive skills as well. This present study focused on the students’ mean scores in answering the final test without differentiating the mean score for LOTS and HOTS questions whereas Nair et al. (2019) differentiates students’ mean scores for LOTS and HOTS questions. They found that students’ LOTS (lower-order thinking skills) mean score in reading comprehension was higher than HOTS (higher-order thinking skills) mean score.

Regarding the students' total correct answers in answering test items issued by the Education Office of Mataram, it showed that the mean score of students' total correct answers for both multiple-choice and essay test items was 18.08 SD = 6.97. On average, the students could answer for about 18 questions correctly. The median was 19 and the modus was 20. Most students could answer the C1 (remembering) and C2 (understanding) questions correctly. It was related to the dominances cognitive level in the questions. Students' achievement in the final test was sufficient (42.46%). The interpretation of the result is based on the example that was provided by Arikunto, the quantitative criteria without consideration pay attention to the range number. She states the example that the maximal condition that is expected for learning achievement is 100% then it is multiplied by five categories (Arikunto, 2018)

## CONCLUSION

First, it can be concluded that LOTS questions were more dominant than HOTS (higher-order thinking skills) questions. In multiple-choice, the most dominant level was C2 (understanding) and the least dominant level was C3 (applying). Meanwhile, in essay test items, all those five questions were LOTS (lower-order thinking skills) questions. Thus, the Education Office should provide well-distributed test items to train and measure students' cognitive skills. The well-distributed test items will train students' other cognitive skills thus the teacher will know which levels the students are less to answer correctly and which levels are more capable to be answered correctly. It is also suggested to the Education Office of Mataram to re-evaluate the test items in order to construct better test items in the future. Second, on average, the students could answer for about 18 questions correctly. Most students could answer the C1 (remembering) and C2 (understanding) particularly in multiple-choice questions correctly which was related to the dominant cognitive levels in the test items. It showed that it was difficult for students to answer questions if they were asked to draw meaning and to infer the correct answer when the words did not state directly in the text. In addition, on average, students' achievement in answering the final test items was sufficient (42.46%). Furthermore, for future instruction, the teachers also should provide students with more synonyms and vocabulary to sharpen students' other cognitive skills and to train students how to infer and draw meaning that is not stated in the text. In addition, the students should practice more at the C3 level (applying) to improve their scores and also practice more to improve their other cognitive skills as well.

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