ANALYSIS OF HIGHER-ORDER THINKING SKILL (HOTS) IN THE MID-TERM TEST OF ENGLISH LANGUAGE EDUCATION STUDY PROGRAM PAMANE TALINO COLLEGE OF EDUCATION

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Abstract

The implementation of Higher-Order Thinking Skill (HOTS) questions in every subject is essential to meet the challenge of 21st century. It is used to stimulate the students' critical thinking in analyzing certain issue. However, the use of HOTS questions in the assessment is still limited. This research analyzes HOTS question in the mid-term test of 5 subjects in English Language Education Study Program STKIP Pamane Talino. We examine the test item using The Revised Bloom's Taxonomy. The items are analyzed quantitatively and they are described qualitatively. The researchers found out that 62% of the test item classified into Lower-Order Thinking Skill (LOTS) and merely 38% test items are classified into HOTS. The finding of the research also reveals that the level of HOTS included in the mid-term test is in the level of analysis. Therefore, the lecturer should be encouraged to create the HOTS-based test item.

Keywords: *HOTS, Mid-term test, English*

INTRODUCTION

The development of education is dynamic since it goes with the development of era. Facing the 4th Industrial Revolution, we have witnessed the fast-paced evolution of technology, advance economy and innovative industries which require more educated and skilled workers with the ability to respond flexibly to complex problems, communicate effectively, manage information, work collaboratively and produce new knowledge (Kozma, 2009 in Kuger et. al. 2016). This new demand of society is the educational sector is trying to address. Producing graduates who are equipped with the 21st century skills will enable them to succeed and thrive in this modern world. Thus, the higher order thinking (HOT) was introduced in education, both in schools and higher education.

The higher-order thinking is defined by Brookhart (2010) in three categories such as transfer, critical thinking and problem solving. Anderson Krathwohl et al (2001) elaborates transfer as making sense of and able to use what have been learned. That is, students not only acquire the knowledge and skills, but also can apply them to new situations. It was affirmed by Brookhart (2010) he said, it is this kind of thinking that applies to life outside school were thinking is

characterized by a series of transfer opportunities rather than a series of recall assignments to be done.

The critical thinking refers to reasonable, reflective thinking that is focused on deciding what to believe or do. (Norris and Ennis 1989) and 'artful thinking', which includes reasoning, questioning and investigating, observing and describing, comparing and connecting, finding complexity and exploring viewpoints (Barahal, 2008). Problem solving is a skill that enables a person to find solution for a problem that cannot be solved simply by memorizing (Nitko and Brookhart, 2007). Brookhart (2010) made it clear that if teachers think of a higher-order thinking as problem solving, they can set lesson goals to teach students how to identify and solve problems at school and in life.

Consequently, it is a must for the educators to be familiarized with the Bloom's Revised Taxonomy to be able to train their students to think critically by triggering their thoughts with questions formulated in higher order thinking. The revised Bloom's Taxonomy (Anderson, 2001) was intended to address this changing nature of education and a more relevant structure for the 21st century. The most relevant to this entry is the revised version of the cognitive domain as follows:

Table 1. Revised Bloom's TAXONOMY	
Lower Order Thinking Skills	
Level	Description
1. Remembering	Retrieving relevant knowledge from long-term memory.
2. Understanding	Constructing meaning from oral, written and graphic messages.
3. Applying	Carrying out or using procedure for implementation
4. Analyzing	Breaking material down into constituent parts in order to determine the relation of said parts.
5. Evaluating	Making judgments based on criteria and standards.
6. Creating	Putting elements together in order to form a functional whole.

Table 1 shows in developing students' HOT the lecturer must promote student engagement task beyond the third level 'applying' to encourage analyzing, evaluating and creating activities. In this research, the higher order thinking level in Bloom's Taxonomy will be used by the researchers as criteria to analyze the test items used by the English teachers to develop students' HOT.

METHODOLOGY

This research is a descriptive research that aimed at analyzing the English test items based on higher order thinking skills. The objects of the research are the test items for midterm examination developed by English Language Education

Study Program (ELESPA) lecturers in STKIP Pamane Talino Ngabang. The data were obtained from the mid-term test of 10 subjects in the odd semester 2019/2020.

The researchers used the criteria as the guidance of the researchers in analyzing each test question. Each test item is analyzed using the criteria proposed by Bloom's Taxonomy for formulating the principles of questions based on criteria or indicators. The researchers analyzed each test question and label it according to the criteria used. Then, the researchers summed the percentage of the test items that are identified as LOTS and HOTS questions. The formula of the percentage is:

$$P = \frac{n}{N} \; x \; 100\%$$

P = the percentage
n = number of questions based on the criterion found in the questions
N = the total number of questions

FINDING AND DISCUSSION

The researchers found three findings in this research. The first is related to the two major level of Bloom's Taxonomy which Lower-Order Thinking Skills (LOTS) and Higher-Order Thinking Skills (HOTS). Based on the analysis, there are 37% questions categorized as HOTS, while 67% questions are categorized as LOTS. Diagram 1 shows the percentage of HOTS and LOTS questions in the mid-term test of the odd semester 2019/2020.

Diagram 1 The Percentage of HOTS and LOTS questions
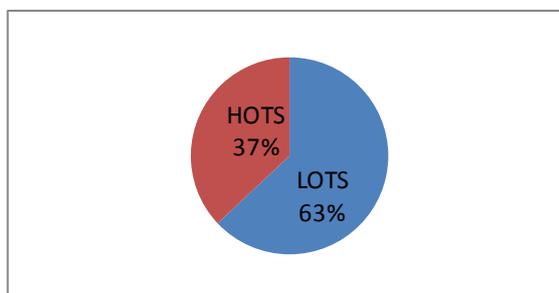
The second finding is related to the specific skills of the aspects of LOTS. Based on the result of analysis, the researchers found that the level of LOTS included in the mid-term test was in the level of Remembering. There are 64 questions from 73 question in LOTS are categorized as Remembering, 7 questions are categorized as Understanding, and merely 2 question are in the level of Applying. Table 2 reveals the samples of LOTS items.

Table 2. The Samples of LOTS items		
No	**Criteria**	**Questions**
1	**Remembering**	Mention and explain the Elementsof prose fiction (5) .
		Bavaria is an attractive region in which to live.
		.... has mountains and lakes, and is close to the ski

		resorts in Germany and Austria
2	**Understanding**	Normally, how many sentences are in this poem? Write the sentences
3	**Applying**	Use these words to write the sentences a. Research b. Easier c. Learn d. Bought e. Firsly

The third finding is related HOTS aspects. Based on the result of analysis, the researchers found that the level of HOTS item was in Analyzing and Creating. There are 18 questions from 25 question in HOTS are categorized as Analyzing, 2 questions are in the level of Evaluating, and 5 questions are categorized as Creating. Table 3 reveals the samples of HOTS items.

Table 3. The Samples of HOTS items

No	Criteria	Questions
1	Analyzing	Find a local folklore from your village or the area nea you. Write the story in English. Pay attention to the use of diction, punctuation, and grammar.
2	Evaluating	What is your idea about Literature is fictional or imaginative?
3	Creating	Make a video related to the monolog text

From the above findings, it reveals that there is in sufficient numbers of HOTS questions in the mid-term test of ELESPA. There are merely 37% HOTS items found in the mid-term test. From the samples of the question also reveal that the questions encourage students to get involved in organizing the structure and specifically to analyze the parts fit into the overall structure or whole (Anderson et.al 2001 in Putra et.al 2019: p.157). Moreover, if there are insufficient questions that are not embedded with thinking, the test highly possible to impede the students in improving their critical thinking (Putra et. al 2019: p.158)

CONCLUSSION
The need of developing students' critical thinking is very important recently. However, the research findings show that there are insufficient HOTS questions in the mid-term test. There are 37% questions categorized in HOTS items, while the 67% are categorized in LOTS level. Besides, the level of HOTS aspects mostly is in the analyzing level. Thus, it is important for the lecturers to develop their test items based on HOTS criterion. HOTS items will help the students to develop their critical thinking to meet the challenge of 21st century.

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