MENTORING IN INTEGRATING HOTS (HIGHER ORDER THINKING SKILLS) IN READING ASSESSMENT

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Abstract

High Order Thinking Skills (HOTS) have been a topic of discussion among educators in Indonesia in recent years. The awareness of the importance of making test questions that contain HOTS is getting higher after seeing the test results of Indonesian students in several international standardized test events such as the Program of International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS). It is a fact that PISA test and evaluation, the performance of Indonesian students is still relatively low. Consecutively, the average achievement scores of Indonesian students were ranked 62, 61, and 63 out of 69 countries evaluated. The fact drives this community service is done to enhance teachers' competence in integrating HOTS into assessment, particularly in reading skills. The aim of this community service is to mentor Senior High School teachers who teach English Subjects with advanced skills to construct item tests that emphasize higher-order thinking skills in reading skills. The methods employed to achieve the goal are mentoring and focus group discussions. The result of this supervision is the increased ability of teachers in developing assessment of reading skills. This can be seen when the initial observation of the assessment of learning collected and analyzed was seen to have HOTS elements only 50%, and after the supervision and Focus Group Discussions were held, the ability was seen to increase to 80%, which means that the reading assessment created by Wijaya Putra High School teachers contain HOTS questions much higher than the initial conditions. In conclusion, this service activity is able to improve teachers' skills in developing HOTS-in reading assessments.

Keywords: mentoring, HOTS, reading assessment

PENDAHULUAN

Higher Order Thinking Skills (HOTS) represent a cognitive ability that transcends ordinary thinking processes. HOTS entails the capacity of an individual to think beyond conventional norms. This skill involves the capability to analyze, evaluate, and create solutions as part of the problem-solving process (Erdiana & Panjaitan, 2023), (Setyowati, Susanto, et al., 2022), (Mujayanah et al., 2022), (Setyowati, Education, et al., 2022). Moreover, HOTS encompasses the ability to think critically and creatively to draw conclusions. Thus, HOTS demands students to think beyond their regular cognitive abilities (Fatimah & Rinawati, 2022), (Fitrawati et al., 2022). HOTS serves to facilitate students in developing critical and creative thinking skills by utilizing the abilities to analyze, evaluate, create, conclude, and problem-solve. Educators should nurture these skills to enable students to tackle more intricate challenges in their future endeavors. These abilities are indispensable for addressing complex issues. The contemporary evolution of English

language education corresponds with rapid technological advancements while aligning with local wisdom. The congruence between the objectives of English language instruction and the essence of HOTS needs to be synchronized with the applied evaluation framework.

In 2018, the Ministry of Education and Culture introduced a program supporting the implementation of HOTS-oriented learning, focusing on high-level thinking abilities (Darmawan et al., 2021). However, this initiative lacks alignment with the pre-existing assessment system (Mujayanah et al., 2022), (Setyowati, Susanto, et al., 2022). A similar phenomenon is observed at SMA Wijaya Putra, a high school situated in the western part of Surabaya, renowned for its research-oriented and moral education approach. Through conducted observations, it is apparent that SMA Wijaya Putra primarily employs an "assessment of learning" strategy, constituting approximately 80% of its evaluation activities, alongside 10% for "assessment for learning," and 10% for "assessment on learning." Notably, written tests, quizzes, and project-based assessments are predominantly adopted for the "assessment of learning" approach. In order to ascertain the accurate integration of HOTS within these assessments, various written tests have been examined and analyzed using Bloom's Taxonomy. The sampled written tests were sourced from everyday quizzes, mid-term, and final semester exams. The ensuing analysis is detailed below:

Level of Thinking Skill	Sub Level	Daily Exercise	Daily Quiz	Project Based Assessment	Mid or Final Term
Analyzing (C4)	Deafferenting Organizing Contributing	10%	15%	10%	15%
Evaluating (C5)	Checking Criticizing	2%	5%	20%	10%
Creating (C6)	Formulating Planning Producing	1%	5%	20%	10%

Table 1: Percentage of HOTS (Higher Order Thinking Skills) in the conducted assessments.

From Table 1, it is evident that the presence of HOTS in the assessments is still relatively insufficient, as it remains below the 50% mark. This

deficiency, if not addressed attentively, could pose a barrier to realizing the mission and vision of the partner school. Hence, it is imperative that English language teachers receive guidance to promptly integrate Higher Order Thinking Skills into the assessment of learning.

In this article reading assessment are the focus of the study, due to its' continuous cognitive and productive operation. In other words, it deals with a higher degree of reading activities in which students have to make sense of the text. Reading as a strategic process by which readers create or allocate meaning to a text using the text's hints and their own prior knowledge. Furthermore reading is able to clarify that this concept requires two key perspectives that assist us to understand the understanding process, namely understanding as a strategic process of constructing meaning and understanding. Understanding as meaning-building is a process by which the reader builds or allocates meaning through communicating with the text, while understanding as a strategic process is a process through which readers adapt their reading to suit their intent and the type of text they are reading.

Reading comprehension is a part of the ability in interpreting text, grasp its meaning, and interact with what the reader already knows. Knowing the meaning of words, the competence to recognize the meaning of a word from the context of the debate, the competence to follow the organization of the passage and to recognize its backgrounds and references, the competence to draw inferences from a passage about its content, the competence to identify the main concept of a passage, the competence to answer questions are necessary to require the meaning of a passage.

Skills for reading the text are affected by the capabilities of readers and their capacity to interpret knowledge. Students use too much of their cognitive proficiency to read individual words because it is difficult to grasp word recognition, which disrupt with their competence to grasp what is read. In order to enhance reading comprehension and inferences, there are many reading techniques, including developing their vocabulary, introducing critical text analysis, and practicing deep reading.

METHOD

The enhancement of English language teachers' ability to integrate Higher Order Thinking Skills (HOTS) into assessments constitutes the objective of this community engagement endeavor. The aspiration is for English language teachers at partner schools to become more proficient in managing assessments that have already been executed. The employed methodology encompasses the following facets:

a.   Mentoring

Mentoring is a dynamic and personalized learning relationship where a more experienced individual, known as a mentor, provides guidance, support, and knowledge to a less experienced person. This process aims to facilitate the English Teachers by sharing insights, offering advice, and helping them upgrade the implementation of HOTS into assessments of learning. In this context, mentoring goes beyond onsite meeting or face to face interaction and online collaborative communication such as collaborative communication in Google drive working space, social media communication. The mentoring encourages the development of skills, confidence, and a broader perspective in putting HOTS in assessments.

b. Supervision

One facet of the Community Engagement initiative involves providing direct support and guidance to the partners. Within this capacity, various support activities are undertaken, including observation, collaborative brainstorming, and efforts aimed at enhancing soft skills related to effective management. Furthermore, there is a distinct emphasis on optimizing teacher competencies, particularly those specialized in English language, to adeptly administer assessments founded on Higher Order Thinking Skills (HOTS). The methodology directed towards English language teachers aims to upgrade the implementation of HOTS into assessments of learning. Subsequently, direct mentoring takes place throughout the community engagement activities. Supervision offered to English language teachers seeks to enhance their capabilities in developing improved HOTS-based assessments of learning by providing technical assistance and guidance, thus augmenting the quality and implementation of assessments of learning.

c. Focus Group Discussions

Focus group discussions entail systematic and directed conversations regarding the information pertaining to the formulation of assessments of learning as already conducted at the partner institutions. These discussions can be regarded as a method for collecting information regarding HOTS-based assessments of learning through group discourse involving English language teachers, the community engagement team, and school leadership.

RESULTS AND DISCUSSION

1. **The Implementation of Mentoring and Supervision**

This supervision and mentoring activity are carried out with a focus on enhancing the English teachers' skills in integrating Higher Order Thinking Skills (HOTS) into the assessment of learning. Assessment of learning in this context refers to written exams and quizzes aimed at measuring and evaluating the learning process. The mentoring activities are conducted periodically, following the existing schedules of both teachers and school administrators. The purpose of this mentoring is to address challenges faced by the partners. One of the challenges is the shortage of teaching staff. Hence, this mentoring program not only aims to improve the quality of educators but also to help tackle this issue. The mentoring team also assists in identifying areas that need improvement and enhancement by the partners. The mentoring and observation activities at the partner institution are carried out according to the agreed-upon initial procedures with the partners. The execution of these activities runs smoothly due to the strong cooperation of both the school leadership and teaching staff at the partner institution.

Supervision is conducted every two weeks through face-to-face meetings, with each supervision lasting for 60 minutes. Throughout these supervisory sessions, the Community Service Team provides intensive mentoring for approximately three months. The materials in supervision and mentoring activities include reinforcement and refreshment of assessment of learning and HOTS.

- Assessment of learning

The assessment of learning has a more summative nature and is used to confirm the knowledge and skills possessed by students, in order to demonstrate whether they have achieved certain criteria, as well as to evaluate the effectiveness of teaching programs and services that will be reported to the public within a specific timeframe (Setyowati, 2019), (Merieme BELARBI & BENSAFA, 2020), (Abeywickrama, P & Brown, 2010), (Mahroof & Saeed, 2021). In this context, what is meant by assessment of learning is a test that includes mid-term assessments, end-of-semester assessments, quizzes during learning sessions, both written and non-written. Assessment of learning can also be referred to as formal assessment, which consists of standardized tests or formal standardized tests. These are formal measurement methods using designed and validated instruments meant to measure individual characteristics. Test results are then provided individually or in groups. The primary purpose of these standardized tests is to measure abilities, achievements, attitudes, interests, talents, values, and personal characteristics. Assessment of learning involves students in answering a series of written or oral questions. Standardized tests have two distinct characteristics. Firstly, they gather all individual scores to generate a single score or a set of scores that reflect information about that individual. Secondly, these tests compare individual scores with scores from a group of similar people to determine how an individual's responses relate to others.

- HOTS

The term HOTS (Higher Order Thinking Skills) can be interpreted as various types of advanced skills, including the ability to transfer knowledge, critical thinking skills, and problem-solving abilities. HOTS or higher-order thinking skills are divided into four groups: problem-solving, decision-making, critical thinking, and creative thinking. The ability to transfer knowledge is when learners can apply the knowledge they've acquired in new situations. Problem-solving ability refers to the learners' capability to solve the problems they encounter. Decision-making skills mean that learners must be able to make logical and rational decisions. Additionally, critical thinking skills are essential, where learners need to think deeply and reflectively to reach conclusions. On the other hand, creative thinking is the ability to create something useful and practical from ordinary things. From the explanation above, it can be understood that HOTS is a combination of several essential skills for learners (Setyowati, 2019), (Setyowati, 2020), (Mujayanah et al., 2022), (Setyowati, Education, et al., 2022), (Setyowati, Susanto, et al., 2022), (Mujayanah et al., 2022), (Erdiana & Panjaitan, 2023), (Mega et al., 2023), (Nangoy et al., 2023). In this activity, the concept used is HOTS within the framework of Bloom's revised taxonomy by Krathwhol and Anderson (Lorin and Krathwohl, 2001), which is divided into three skills: analyzing, evaluating, and creating. The higher-order thinking skills in the revised Bloom's Taxonomy are as follows:

The analyzing level involves breaking down information into smaller ideas and determining the relationships between those ideas. Verbs in this level include comparing, examining, critiquing, testing.

The evaluating level includes assessing and critiquing the value of material based on criteria. Verbs in this level include evaluating, judging, deciding.

The creating level involves generating, planning, and producing new structures from different elements. Verbs in this level include constructing, designing, creating, developing, writing, and formulating.

The three level above can be presented in the following:

Figure 1: The Revised Bloom Taxonomy

2. The Implementation of Focus Group Discussions

To optimize the development of the assessment of learning, a periodic Focus Group Discussion (FGD) is conducted. The FGD serves as a platform for conducting SWOT analysis, performing evaluations, and reflecting upon the outcomes and simulated assembly of the assessment. In pursuit of the success and seamless execution of this educational endeavor, the active involvement of two students is enlisted. This engagement stems from the findings of a prior investigation in 2022 (Setyowati, 2022), which advocated for the construction of language tests utilizing the revised Bloom's taxonomy.

The FGD activities are an extension of previously executed supervision or mentoring undertakings. These sessions convene biweekly, spanning 60 to 90 minutes each. The FGD gatherings comprise three of English language teachers, the school principals, and the community service team. The proceedings are led by the project lead, overseen by the community engagement initiative, and moderated by the leader of community service activities.

Materials in the Focus Group Discussion covers:
-   Qualities of HOTS

The Characteristics of Higher Order Thinking Skills (HOTS) belong to the category of higher order thinking skills that differ from algorithmic tasks. They tend to be complex, with multiple reasonable solutions, involving various processes and interpretations of decision-making, requiring the application of various criteria, and demanding significant effort. According to Setyowati, Susanto, et al. (2022), the defining characteristics of HOTS

are centered around critical and creative thinking. These skills enable individuals to critically evaluate problems and approach them with creative solutions, resulting in the production of something superior and more beneficial in their own lives. With these attributes in mind, the integration of HOTS questions into various types of assessments within the classroom is highly recommended.

To inspire teachers in creating HOTS questions at the educational unit level, the Ministry of Education and Culture (Jenderal & Tinggi, 2020) provides a detailed explanation of the characteristics of HOTS questions as follows:

Measuring higher order thinking abilities: Higher order thinking skills encompass problem-solving, critical thinking, creative thinking, argumentation, and decision-making abilities. In Bloom's taxonomy, these skills include analysis (C4), evaluation (C5), and creation (C6). Higher order thinking abilities involve processes such as analysis, reflection, providing reasons or arguments, applying concepts in different situations, synthesizing, and creating. Creativity in HOTS includes (a) the ability to solve unusual problems; (b) the ability to evaluate problem-solving strategies from various different perspectives; and (c) the ability to discover new solution models different from previous ones. Higher order thinking skills are not merely about remembering, knowing, or reciting information. "Difficulty" is not synonymous with higher order thinking skills. The difficulty level of a question doesn't always mean it involves higher order thinking. For instance, knowing the meaning of an uncommon word might be highly difficult, but it might not necessarily be a HOTS question as it doesn't engage higher order thinking skills. Therefore, HOTS questions don't always imply overall difficulty.

Higher order thinking abilities can be nurtured through the classroom learning process. Thus, to cultivate students' higher order thinking abilities, the learning process should provide opportunities for them to explore concept-based knowledge through activities. Activities in learning can encourage students to develop creativity and critical thinking.

Higher order thinking abilities are not solely about memorizing, knowing, or repeating information.

This concept differs from the difficulty level of a question, which doesn't always depict higher order thinking abilities. For example, understanding the meaning of an uncommon word can be very challenging, but it's not a component of higher order thinking skills.

Thus, Higher Order Thinking Skills (HOTS) questions don't always mean exceedingly difficult questions. Instead, higher order thinking abilities can be nurtured through the classroom learning process. Thus, it's crucial for learning to provide opportunities for students to delve into concept-based knowledge through activity-based learning. Activities in learning play a crucial role in encouraging students to develop creativity and critical thinking, ultimately enhancing their higher order thinking abilities.

- Incorporating HOTS into Reading Assessment

In reading, students not only have to understand the meaning of the words written down but also to emphasize that reading involves a complicated, actively thinking mental activity which requires the students to experience, predict, verify and acknowledge information based on reader's background knowledge and experience. Doing a reading task will need the students' effort to recall and apply what they have learnt (this process resembles transferring in higher-order thinking skills) to perform some critical thinking about the reading text they have to deal with to make meaning.

Before designing reading assessment, the English should make learning outcome and learning activities are in coherent in order to make alignment. Moreover, the standard reading assessments that accurately measure students' achievement in reading skills makes the assessments are more reliable and trustworthy. The following table is the example of learning outcome and learning activities that can be conducted in reading class:

Table 2: The suggested learning outcome and learning activities in HOTS Reading Exercise

Learning outcome	Learning activities
1) Analyzing level Able to Analyze short and simple oral and written interpersonal interaction texts involving greetings, farewells, expressing gratitude, and apologizing, and respond to them by observing appropriate social functions, text structures, and language elements in a correct and contextually suitable manner	Distinguishing between very short and simple oral and written interpersonal interaction texts involving actions of greeting, bidding farewell, expressing gratitude, and apologizing, and responding to them by considering the social function, text structure, and appropriate linguistic elements that are correct and contextually suitable
2) Evaluating Level Able to evaluate short and simple oral and written interpersonal interaction texts involving greetings, farewells, expressing gratitude, and apologizing, and respond to them by considering their social functions, text structures, and appropriate language elements in a correct and contextually suitable manner.	Demonstrating the trengths/weaknesses of very short and simple oral and written interpersonal interaction texts involving actions of greeting, bidding farewell, expressing gratitude, and apologizing, and responding to them by taking into account the social function, text structure, and appropriate linguistic elements that are correct and contextually suitable.
3) Creating Level Create short and simple oral and written interpersonal interaction texts involving greetings, farewells, expressing gratitude, and apologizing, and respond to them by producing appropriate social functions, text structures, and language elements in a correct and contextually suitable manner.	Composing very short and simple oral and written interpersonal interaction texts involving actions of greeting, bidding farewell, expressing gratitude, and apologizing, and responding to them by carefully considering the social function, text structure, and appropriate linguistic elements that are correct and contextually suitable.

Higher order thinking skills (HOTS) play an important part in improving reading comprehension learning materials. As the comprehension of reading, applying critical thought in reading practice is such an important feature to improve the capacity of the students to capture the essence of the text. Sensitive reading is not the same as other forms of reading, such as skimming or browsing the text, but rather kills with higher thinking. This is a helpful method for the positioning of details and increases the overall mood of the subject. The following table will help English teacher in incorporating HOTS into reading questions:

THINKING SKILL	VERBS USED	EXAMPLE TASKS	EXAMPLE QUESTIONS
ANALYZING	Categorize Analyze Classify Compare Contrast Separate Relate	Diary Collection Illustration Questionnaire Flow-chart Model Diagram	How is this similar to...? Compare & and contrast. What are other possible outcomes? Distinguish between?
EVALUATING	Judge Critique Justify Debate Recommend Prioritize Experiment	Survey Graph Report List Criteria Debate Essay Written case	Judge the value of...? Do you think...is a good or bad thing? How would you feel if...? How effective are...?
CREATING	Design Create Plan Construct Invent Devise Make	Story Poem Play Song Animation Invention Website	Can you design a...? How many ways can you ...? What would happen if...? Can you see a possible solution to ...?

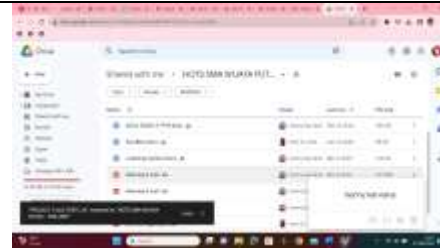Table 3: Reading Comprehending Activities in HOTS

Figure 2: Online Collaboration Communication

Figure: 3 Focus Group Discussion

CONCLUSION

This Community Service are conducted within a total of 10 meeting sessions. Based on the observations from the conducted activities, including supervision and focus group discussions, it was shown that the English language teachers are actively and enthusiastically participating in the mentoring and discussion sessions. Furthermore, the topics covered in this Community Partnership Program are highly valued by the teachers as they contribute to the enhancement of human resources within the partnering institutions.

The refreshing activities focused on Higher Order Thinking Skills (HOTS) and assessment play a crucial role in sharpening the abilities of the teachers to effectively integrate them into both assessment methodologies and instructional practices. These activities are deemed essential for fostering a deeper understanding of these concepts among the educators.

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