Jumping task-oriented e-assessment: How does it assess students' soft and hard skills competency? A needs analysis

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ABSTRACT
This study aimed to analyze the needs of students for jumping task-oriented electronic assessments that can be used to measure students' soft skills and hard skills competencies. Jumping task-oriented electronic assessments can help students improve students' critical thinking skills, in addition to electronic assessments that can make it easier for students to access these assessments anywhere and anytime. This research was conducted at SDN Berundung, Ketapang District, South Lampung with a sample of 5th grade students consisting of 52 students. The data were analyzed descriptively to determine the implementation of the assessment that had been carried out and how far the assessment was able to measure the soft skills and hard skills competencies of students. The results of the analysis show that the assessment has not been carried out electronically and the students' critical thinking skills have not been obtained. Students are judged to need assessment instruments that can be accessed anywhere and can develop students' critical thinking levels. The use of electronic assessment instruments can also train students' skills in using electronic devices, in this case, it can be a laptop or a chromebook.

KEYWORDS
E-Assessment, Jumping Task, Hard Skills, Soft Skills

Introduction
Education is a conscious human effort to develop the potential contained in him both formally and informally in order to improve the quality of life for himself and the community. According to law number 20 of 2003 chapter 1 article 1 paragraph 1 concerning the national education system, states that: Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character and skills needed by himself, society, nation and state. Through education, students are expected to be able to prepare themselves to participate in building the nation, thus they can achieve the welfare of the nation in accordance with the goals of national education. Education is one of the most important parts in building a community to increase quality resources to support life in the future (Fatonah & Yunianto, 2021).

In order to realize the goals of national education, it is necessary to create a conducive learning process and good quality of participant educators. An educator is required to be a facilitator and role model who motivates students in learning. Besides educators who determine the realization of national education goals are students. This is because students are objects in the learning process itself. Learning is a process of giving and receiving knowledge. The purpose of each learning process is to obtain optimal learning outcomes. Through optimizing the learning process, it is expected that students can achieve optimal and satisfying learning outcomes. One way that can support the achievement of student success is by learning.

Learning is an activity of interaction between individuals and their environment that aims to make changes in a person including changes in behavior, attitudes, habits, knowledge, skills, and so forth that are constant (Khairani, 2014). This ability is acquired gradually and continuously from infancy to old age through a series of lifelong learning processes. Learning refers to a complex internal process between educators and students that involves the cognitive, affective, and psychomotor domains. In this case, the educator acts as a party that regulates the learning process thus learning runs conducive and produces the expected learning outcomes.
Learning is a process of interaction between students and educators (Nizaar et al., 2021). The purpose of each learning process is to obtain optimal learning outcomes. Through optimizing the learning process, it is expected that students can achieve optimal and satisfying learning outcomes. One way that can support the achievement of student success is by learning. The learning process in schools is guided by a set of current curriculum.

The curriculum is a set of plans that regulate the objectives, content, and materials in the learning process and the methods used as guidelines for the implementation of learning activities in order to achieve certain educational goals. The purpose of the curriculum is to encourage students to be better able to observe, ask questions, reason, and present everything they get or know after receiving learning materials and obtaining learning outcomes as expected in the learning process at school (Fatonah & Yunianto, 2021). The curriculum currently being used is the 2013 curriculum. The 2013 curriculum is the curriculum currently applied in Indonesia. One of the peculiarities of the 2013 curriculum is related to the implementation of learning, where the 2013 curriculum requires teachers to carry out integrative thematic learning that emphasizes a scientific approach (Pohan & Dafit, 2021). In the 2013 curriculum, learning is student-centered, which emphasizes the active role of students in building their knowledge and educators act as facilitators (Mutmainah et al., 2021). Teaching and learning a process is a system that cannot be separated from other components that interact with each other (Mapiliando et al., 2021). Effective learning is not enough if it only provides information, learning expects students to be active in the learning process (Dessiane & Hardjono, 2020). Learning is an effort to direct students in the learning process so that they can obtain learning objectives (Ramiati et al., 2021). The material in the 2013 curriculum is presented in the form of themes to link several subjects. Thematic learning is a model in integrated learning (integrated instruction) that uses themes to link several subjects. Thematic learning can be interpreted as an integrated learning model that uses a thematic approach involving several subjects to provide meaningful experiences for students (M. Rusman, 2011).

Thematic learning as a learning system that allows students both individually and as a group to be more active in exploring, discovering concepts and principles in a holistic; meaningful and authentic way, (Fatonah & Yunianto, 2021). Besides, thematic learning is a learning concept that links several subjects to provide meaningful experiences during the learning process to students (Setiawan et al., 2019). Thematic learning really demands the creativity of educators in selecting and developing learning themes. Thematic learning in the 2013 curriculum expects educators to teach or demonstrate how technology is used in learning, such as using electronic media as a tool in the process of assessing student learning.

Thematic learning has several characteristics. Thematic learning has the following characteristics namely: Student-centered, providing direct experience, not separating subjects clearly, presenting concepts from various subjects, being flexible, learning outcomes according to the interests and needs of students, using the principle of learning while playing and having fun, developing student communication, emphasizes the process more than the result, (Ibnu Hajar, 2019).

The 2013 curriculum also expects the maximum use of technology in every-learning. One of the uses of ICT that can be used in education is in terms of assessment. E-assessment (electronic assessment) is an assessment that involves the use of digital devices to assist in the construction, delivery, storage or reporting of student assessment assignments; responses; score or feedback (Crisp et al., 2011). The use of e-assessment can facilitate the implementation of the assessment because the implementation can be done anytime and anywhere. This is very helpful especially during the Covid-19 pandemic. Since the pandemic period experienced by various countries, it has had a very large impact, including in the education sector. Learning that is usually conducted face-to-face in class has changed to learning that is carried out online from the homes of each student. Learning from home is carried out with Distance Learning system. Distance Learning is type of educations in which students are separated from educators and their learning uses various learning resources through communication technology, information and other electronic media (Amelia & Muzakki, 2021). In learning that is carried out online generally causes problems including problems that occur in the learning assessment process. The learning assessment process is hampered because it does not allow face-to-face meetings between educators and students.

The 2013 curriculum also expects an accelerated development of things that can meet future needs and welcome the Indonesian Golden Generation. Currently, it is being promoted regarding 21st century skills in accordance with the objectives of the 2013 curriculum. 21st century skills are skills that students really need to master in this era of globalization. Mastery of 21st century skills will determine the future of Indonesia's future generations. Problem solving skills are one of the important skills of the 21st century (Wulan et al., 2019). Specifically, 21st century skills can be interpreted as skills that have implications for the educational process that are not only focused on the implementation of conventional learning activities oriented to the development of cognitive skills only, but also a learning process that is directed at contemporary issues (such as global awareness, economics, and environmental sustainability), (Trilling & Fadel, 2009). One of the learning methods that can be used in an effort to fulfill this is by using the jumping task learning method.

Jumping task is a learning method by giving challenging questions, namely using the C4 level in Bloom's taxonomy (Shofia et al., 2018). Jumping Task itself is to provide challenging questions/tasks that are beyond the level of curriculum demands (Admin & Asari, 2017). Four things can be carried out in giving jumping questions, namely: 1) What has been understood through questions can be applied or deepened further, 2) Tasks are explored and investigated from various angles using the latest references, 3) Tasks can interpret something in an event, 4) Tasks contain new things by linking knowledge and concepts that have been learned (Hobri, 2016). Jumping task is the main part of learning using HOTS (Saskiyah & Putri, 2019). Higher order thinking skills (HOTS) are the ability to connect,
manipulate and transform existing knowledge and experience to think critically and creatively in order to solve problems in new situations. (Rofiah et al., 2013). These high-order thinking skills include problem-solving skills, critical thinking, creative thinking skills, and decision-making abilities (Nur Dinni, 2018). This makes it possible with high order thinking students will be able to clearly distinguish an idea, be able to solve problems correctly, be able to construct explanations properly, and understand complex things to be clear (Dan Sri Kadarwati, 2013). HOTS includes logic and reasoning skills, analysis, evaluation, problem solving, creation and judgment. Analytical ability can be interpreted as an individual's ability to determine the parts of a problem and show the relationship between each of these parts, can see the cause of an event that supports a statement. Evaluation ability is an activity to form an assessment regarding the value of an idea, creation, procedure or method. Creation is the ability to combine elements to form a new structure, determine procedures, and find more than one answer (multiple solutions). This reasoning ability is needed in the process of thinking and drawing a conclusion that will form knowledge (Kurniati et al., 2016).

High order thinking skills will occur when students can relate new information to information that has been stored in their memory and link it thus rearrangement occurs and develops that information to achieve a goal or find a solution to a difficult situation (Kurniati et al., 2016). The main purpose of high order thinking skills is how to improve students' thinking skills at a higher level, especially those related to the ability to think critically in receiving various types of information, think creatively in solving a problem using the knowledge they already have and make decisions in more complex situations (Saputra, 2016). The requirement for implementing HOTS is to use HOTS operational verbs that can be used as a reference for making student activity sheets (Pratiwi et al., 2020). Jumping Task is the main part of HOTS that can support the implementation of learning based on the 2013 Curriculum which creates the development of aspects of knowledge and skills as well as the development of spiritual and social attitudes proportionally.

Giving jumping tasks is intended to motivate and make students more intense in collaborating with their group colleagues where emotional management and communication methods must be carried out properly so that cooperation in groups can run well too. Regarding this, through the application of the jumping task method, students not only can develop their hard skills but also develop their soft skills. The world of education currently not only focuses on increasing pedagogic and professional abilities (hard skills) but also focuses on social skills (soft skills), (Mufti, 2016). Hard skills competence is competencies related to a person's IQ. Hard Skills is mastery of knowledge, technology, and technical skills in a particular field related to a process, tool, or technique, (Hendriana et.al, 2017). Hard skills are closely related to inherent technical skills or needed for certain profession. Hard skills are relatively easy to see and the results can be measured obviously, (UBaydillah, 2019). Hard skills competence can be in the form of the skills of students to operate electronic devices such as gadgets, laptops, or chromebooks, while soft skills are competencies related to a person's EQ. Soft skills is ability outside of technical and academic skills, which more prioritize on intrapersonal and interpersonal skills, (Wibowo & Hamrin, 2012). Skills included in soft skills include critical thinking skills, communication skills, emotional skills, and group skills.

Methods

This type of research is descriptive qualitative which was conducted to determine the needs of students for jumping task-oriented electronic assessments that can be used to measure the soft skills and hard skills of students. This research was conducted on the fifth grade students of SDN Berundung, with total of 52 students. Considerations for determining the number of samples in this study, namely the needs of students for assessment instruments that can be easily accessed anywhere and anytime. In addition, the school's facilities and infrastructure can support the use of the e-assessment, where the school has a chromebook that students can use in conducting the e-assessment. Class V was selected because at this level students are able to access electronic devices more independently and purposefully. Data collection was carried out by distributing questionnaires to students. The data that had been obtained was analyzed descriptively to determine the implementation of the assessment that had been carried out and how far the assessment could measure the soft skills and hard skills competencies of students. In this data collection technique, the data was analyzed by calculating the average of each answer based on the score obtained, using the following assessment criteria:

<table>
<thead>
<tr>
<th>Category</th>
<th>Value Weight</th>
<th>Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very bad</td>
<td>1</td>
<td>25%-43%</td>
</tr>
<tr>
<td>Bad</td>
<td>2</td>
<td>44%-62%</td>
</tr>
<tr>
<td>Good</td>
<td>3</td>
<td>63%-81%</td>
</tr>
<tr>
<td>Very good</td>
<td>4</td>
<td>82%-100%</td>
</tr>
</tbody>
</table>

Result and Discussion

The questionnaire distributed to students consisted of 6 statements. The results of filling out the questionnaire, namely: 1) 90% of students stated that the assessment that had been carried out so far had not been carried out electronically. Electronic assessments that had been carried out only by way of teachers sending photos of questions through the whatsapp group, after that students were asked to answer the questions on a piece of paper or a book, then students were asked to send photos of their answers via the WhatsApp application to the teachers'
private and Suggestion

Based on the results of the questionnaires, it shows that the assessment had not been done electronically and had not been able to develop students’ critical thinking skills. Critical thinking must be developed in students considering the 21st century skills must be mastered in accordance with the objectives of the 2013 curriculum by students. 21st century skills are skills that students really need to master in the era of globalization. Mastery of 21st century skills will determine the future of Indonesia’s future generations. Critical thinking is one of the 21st century skills. One way to achieve critical thinking skills is to use jumping tasks. Jumping task is giving questions/tasks that are challenging/beyond the level of curriculum demands (Nefriyon, 2016). Jumping task is the main part of learning that uses HOTS (Higher Order Thinking Skills) (Saskiyah & Putri, 2019). In addition, types of high-level questions are able to stimulate students to think more deeply about the subjects (Barnett & Francis, 2012). It cannot be denied through the question of higher order thinking tasks, students become more easily motivated to develop their thinking skills. Commonly, higher-order thinking questions are called HOTS which include the skills to analyze, evaluate, and create, (Anderson et al., 2001). Based on this explanation, it is necessary to carry out an assessment that does not only measure cognitive competence, but is also able to measure the soft skills and hard skills of students. This is because currently the world of education is not only focused on improving pedagogical and professional skills (hard skills) but also very focused on social skills (soft skills). This is an effort made to create a golden generation of Indonesia that can compete with the global community in the future.

Students are judged to need assessment instruments that can be accessed anywhere and can develop students’ critical thinking levels. The practicality of the assessment instrument used is able to overcome the distance problem that occurs during the pandemic. The use of electronic assessment instruments can also train students’ skills in using electronic devices, in this case, it can be a laptop or a chromebook. Students are required to be proficient in using electronic devices because in this era of globalization everything is closely related to technology, both offline and online. The use of electronic instruments has advantages for students, especially during a pandemic. A number of studies have shown the effectiveness of using electronic assessment instruments in learning, (Yang et al., 2015). Electronic assessment instruments can make it easier for students to work on test questions because they can be carried out anywhere, especially during the Covid-19 pandemic. During the pandemic, it is not only the economic sector that is volatile but also the education sector. The education sector underwent a very big change because before the pandemic the learning process could be freely carried out face-to-face between educators and students. However, after the pandemic hit, the learning process was no longer possible to be conducted by face-to-face. Learning that is usually carried out face-to-face in various classes becomes online learning that is carried out from the homes of respective student. Learning from home is carried out with the distance learning. Using electronic assessment instruments can make it easier for educators and students to carry out the assessment process more effectively.

Conclusion and Suggestion

Based on the results of the study conducted by spreading questionnaires to 52 participants at State Elementary School of Berunding, it can be concluded that the assessment process which has been conducted does not use electronic device yet and still could not develop students’ critical thinking skill. The assessment conducted was still traditional namely by working on test questions in LKPD (Students’ Worksheet) printed in paper. The questions given to students were still in the form of routine questions that could be answered by students easily without doing any deep analysis first. It caused less development of students’ critical thinking skill.

Jumping task oriented electronic assessment instrument which can measure soft skills and hard skills competence are needed by students until they can find out how far their ability is so that then they could fulfill the 21st century skill as what becomes the learning purpose these days. Jumping task can support the learning implementation based on Curriculum 2013 which expects the creation of knowledge and skill aspect development and spiritual and social attitude development proportionally. Thus it can be concluded that the development of jumping task oriented electronic assessment instrument which can measure soft skills and hard skills needs to be implemented in the assessment process in order to help the assessment process to be effective even though not conducted in the class and the students can find out how far their soft skills and hard skills competence are.
References


