Study assessment, quisses, and critical thinking skill of elementary school students

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ABSTRACT
The use of Quizizz that can be set based on the learning objectives to be achieved. Quizizz can be used by educators as an alternative to assess learning as effectively as possible in order to achieve the learning objectives. The purpose of this study was to determine the analysis of Quizizz-Based assessment to improve critical thinking in the fourth grade of elementary school. This research uses descriptive qualitative research on the subject of 6 educators and 30 students with data collection using a questionnaire technique to students and educators. This data analysis is data reduction, data presentation, and verification. The results of this study are that fourth grade students at SDN 1 Jati Indah Tanjung Bintang still need an assessment application or assessment according to the needs of the times, namely in the form of applications that can be accessed online such as quizizz in the cognitive assessment of students and have not increased critical thinking in the learning process, then the alternative solution requires the development of quizizz based assessments to improve critical thinking in elementary school thematic learning.

KEYWORDS
Assessment; Quizizz; Critical Thinking

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Introduction
Education is an orientation process in the form of knowledge transfer. In this educational process, students are positioned as educational subjects. Educational activities are aimed at developing learning skills, knowledge and personality formation of students. Formal educational activities are usually carried out in schools. Good education is education that helps students gain broad knowledge, have skills, have noble character, and be active in learning. To achieve this goal, education must be of good quality. Only with quality education we can achieve educational goals and improve the quality of education. Improving the quality of education to improve the learning process. Assessment of the learning process can be seen from the changes that occur compared to the previous state. Assessment of learning outcomes is an important stage in learning activities. Assessment is the process of gathering information as the basis for making decisions about students, regarding the curriculum, curriculum, and school policies (Basuki and Hariyanto, 2014). Assessment aims to identify student skills before and after learning, provide feedback to teachers to improve learning tools (including teaching methods, approaches, activities and learning resources) used and provide information to parents and schools about the effectiveness of education (Hamzah, 2014). Efforts to improve the quality of learning are possible through improving the quality of the assessment system. Educational activities aimed at developing learning capacity, knowledge and personality formation of students. Formal educational activities are usually carried out in schools. Good education is education that helps students gain broad knowledge, have skills, have noble character, and be active in learning. To achieve this goal, education must be of good quality. Having a quality education will be able to achieve educational goals and improve the quality of education. Improving the quality of education requires improving the learning process. Assessment of the learning process can be seen from the changes that occur from the previous state. Assessment of learning outcomes is an important component of learning activities. Efforts to improve the quality of learning are possible through improving the quality of the assessment system.

Learning in this 21st century has a difference with learning in the past. Currently learning requires standards as a reference to achieve learning objectives. Through the standards that have been set, teachers have definite guidelines about what is taught and what is to be achieved. Advances in information and communication technology have changed human lifestyles, both in working, socializing, playing and studying. Entering the 21st century, these technological advances have entered various aspects of life, including in the field of education. Learning in the 21st century must be able to prepare the generation of Indonesian people to meet the advancement of information and communication technology in social life, (Syahputra, 2018).

The development of era of advanced technology make the teacher must follow the era of the progress of the times. According to Hariyanto & Jannah (2020), teachers have a vital role in changing a nation, there are various things that teachers need to do as a form of revolution in the digital era. Thinking skills that must be mastered by students in education in the 21st century are creative, critical thinking, problem solving, and decision making. The
way of working or the ability to work in a global and digital world is that students must be able to communicate and collaborate. Critical thinking includes the ability to think in high order (high order of thinking) which is one component in the issue of 21st century intelligence (The issue of 21st century literacy). Critical thinking is an important thing that must be possessed in building student knowledge. Critical thinking skills will stimulate students’ cognitive reasoning in acquiring knowledge. Students’ critical thinking is needed, because during the learning process students develop thinking ideas about the problems contained in learning, (Diharjo et al., 2017).

Many teachers are still afraid to use media in the form of web-based applications. This causes researchers to be interested in knowing how teachers and students perceive the use of the Quizizz web application as a learning medium. The perception of teachers and students is necessary. Thus, no more teachers are afraid to try using web-based applications as learning media. Many web-based applications are currently being developed such as Kahoot, Quizizz, Ruang Guru, Zenius and many more. In this study, researchers used a web application, namely Quizizz. Quizizz is a web tool for creating interactive quiz games that are used when learning in class. An interactive quiz that has up to 4 or more answer options including the correct answer and an image can be added to the background question (Ramadhani et al. 2020).

Currently, there are lots of modern or technology-based evaluation tools that can be used by teachers in order to provide an assessment or evaluation to students. This of course can make evaluations conducted by teachers more effective and efficient. In addition, the use of technology-based evaluation tools is also expected to make students more relaxed in carrying out tests. Some modern technology-based evaluation tools that can be used by teachers to create quizzes or record student opinions are such as kahoot, quizizz, scrotive, poll Daddy, verso, poll everywhere, google form, classmaker, and so on (Chaiyo & Nokham, 2017). Quizizz is an application that provides formative questions with various choices that are presented in a fun and interesting way for all students.

In the opinion of Noor (2020), Quizizz is an interactive quiz game that can be applied while studying in class as an example of implementing formative assessment. Quizizz can be accessed with a computer or android that is connected to the internet network. It has an attractive appearance and is easy to input questions. The process of implementing the Quizizz application-based assessment in the form of questions and answers is automatically displayed on the screen of each user, both smartphone and PC/computer, so there is no need for LCD or projection screen assistance (Wihartanti et al., 2019).

Researchers also distributed questionnaires of needs analysis to 30 students in class IVA at SDN 1 Jati Indah Tanjung Bintang. Collecting data on the needs of students aimed to see how important it is to use the assessment using the Quizizz application. The results of the needs analysis questionnaire show that students need smartphones/laptops/notebooks 83% of the total 30 students. Besides, 78% of students need an assessment application according to the needs of the times, namely in the form of an application that can be accessed online. Furthermore, 87% of 30 students expect the use of applications such as Quizizz in the cognitive assessment of students.

Various previous studies (Rini, 2017) mention that the use of the SETS approach has an effect on improving elementary school students’ science process skills. Regarding with assessment instruments (Pusparani, 2020) the use of Quizizz media as an application for learning evaluation activities was declared effective because it was able to improve learning outcomes and students’ understanding of the material. In addition, Quizizz media is considered efficient for teachers and students because it is easy to use, more efficient in paper use (paperless), and can be done anywhere and anytime. A research of Handayani & Wulandari (2021) show that that Quizizz also includes 21st century skills such as critical thinking skills, creative and innovative skills, communication skills, and collaborative skills. Quizizz has many positive impacts on learning, especially for increasing student motivation, where motivation itself can improve critical thinking skills and creativity skills. Kurniawan (2021) affirms that the effect of using Quizizz as an exercise task on the learning outcomes of grade 5 elementary school students create decent results and can have an impact on student learning outcomes.

**Methods**

The method used in this research was descriptive qualitative method by using questionnaire and interview as data collection techniques. This research was conducted on fourth grade students at at SDN 1 Jati Indah Tanjung Bintang in 2022 academic year with a total of 6 educators and 30 students as subjects of this research. This data analysis technique has three stages, namely data reduction, data presentation, and data verification. The aim is to simplify abstract data into a clear and detailed summary, which the data later on is presented in a simpler form in the form of narrative exposure and compiled to reveal the analysis of Elementary School assessment.

In this data collection technique, the data can be analyzed by calculating the average of each answer based on the score obtained, using the following assessment criteria:

| Category     | Point | Value (%) |
|--------------|-------|-----------|
| Extremely Bad| 1     | 25%-43%   |
| Bad          | 2     | 44%-62%   |
| Good         | 3     | 63%-81%   |
| Excellent    | 4     | 82%-100%  |

(Widoyooyo, 2014)

**Results**

The results of the research obtained based on the distribution of needs analysis questionnaires carried out to 30 students in class IVA at SDN 1 Jati Indah Tanjung Bintang. Data Collection on the needs of students to see how important the use of assessment is by using the Quizizz application. The results of the needs analysis questionnaire show that students need a smartphone/laptop/notebook 83% of the total 30 students. 78% of students need an assessment application according to the needs of the times, namely in the form of an application that can be
accessed online. 87% of 30 students expect the use of applications such as Quizizz in the cognitive assessment of students. The results indicate those things can cause the lack of increasing character values, motivation, and the decreased of the level of understanding of students in receiving the learning material presented so that it can affect the results of student learning evaluations. These reasons make teachers feel that using the Quizizz application can make learning more varied, thus it can improve students' skills in learning because indeed the use of online learning evaluation using Quizizz having advantages that can respondents feel yet there are also disadvantages. Students work on questions in the form of quizzes and crosswords to see or observe the formation of students' memory and critical thinking skills. According to Lismay (2019), critical thinking is a process of intelligence, like the creation of concepts, and application by evaluating all information obtained from interpretation and observation, field experience, deep reflection or communication as a basis for belief and taking an action. Therefore, in e-learning using media, for example crossword puzzles, students can develop memory of the material explained by the teacher, observe daily life events. During multiple choice assessments, it has the advantage that students are not allowed to question or cheat students and friends. Therefore, because of the time that has been determined in a question, when students answering Quizizz they don't get the opportunity to ask people around or look at notebooks or look for answers on the Google platform. Thus, over time after taking the test, students can find out the ranking of all students who took the test. Students currently answering questions in the quiz media can find out the right and wrong answers to the questions made. Meanwhile, the advantages of crossword puzzles are that students can work individually without having to be with other students, without too much time to work on questions, and students can practice critical thinking and creativity because these crosswords must match the numbers in the box provided with the answer deemed to fit the part of the box. Discuss the assessment of the use of puzzles and crosswords for students to think critically so that students find it difficult to answer questions on quizzes because time is so fast. However, time that is too fast can train students' critical thinking skills to be able to continue the memory. Meanwhile, the material presented by Quizizz can be adjusted to the content of students in learning. Students are more interested, more focused and serious in implementing it, and answers are automatically displayed on the screen of each user, both smartphone and PC/computer, so there is no need for LCD or projection screen assistance (Wihartanti et al., 2019).

The research is also based on relevant research conducted by Wihartanti et al., (2019) entitled Smartphone-Based Application “Quizizz” as a Learning Media. The similarity of the research includes the aspects studied, namely the learning media. The research differences are in the subjects used. This study concludes that "Quizizz" is the best alternative to be used as a learning medium that is available on mobile applications such as Android and the App Store and can be used as a website via a browser on a computer. Quizizz is effective in increasing the enthusiasm of students in learning. Students are more interested, more focused and serious in implementing it (Wibawa, Astuti, & Pangestu, 2019).

One way to make assessments assisted by android-based mobile phones and computers is to use facilities on the internet in the form of a Contain Management System that has been programmed in the form of a website, one of which is Quizizz. According to Noor (2020), Quizizz is an interactive quiz game that can be applied while studying in class as an example of implementing formative assessment. Quizizz can show data and statistics related to student performance (Putri, & Dwijayanti, 2020). Quizizz can be accessed with a computer or android that is connected to the internet network, has an attractive appearance and is easy to input questions (Agustina & Rusmana, 2019). The process of implementing the Quizizz application-based assessment in the form of questions and answers are automatically displayed on the screen of each user, both smartphone and PC/computer, so there is no need for LCD or projection screen assistance (Wihartanti et al., 2019).

The use of Quizizz allows students to be challenged in class because the scores obtained by students will be displayed after the test is ended by what position the students are in. In addition, the existence of pictures or caricatures when they are done with the test becomes an interesting thing because students become enthusiastic to take the test again and get the highest score. The application of Quizizz learning needs to be done continuously, so that Quizizz can become a competitive application as a learning assessment, in the middle adaptation of 21st century education. The use of learning assessment itself cannot be separated from learning patterns. Learning patterns are organized, then applied based on the boundaries of educational technology. Basically, there are 4 learning patterns applied in Indonesia, 1) Traditional Patterns, namely the teacher-student relationship directly, 2) Teacher patterns with media, 3) Media learning patterns, 4) Media-only learning patterns. The use of the Quizizz application as a learning medium is included in the category of learning pattern number 3, which places the media as a component of the learning system on a par with other components. Quizizz is selected because it has an attractive appearance and the preparation of test questions is very easy. Similar with the website in general, Quizizz can be accessed with a computer or android that is connected to the internet network. Quizizz is able to adapt to the learning objectives thus students have an attitude of curiosity towards the material. The content of the material from Quizizz can also be adjusted to the content of the material so that students feel more familiar with the concepts being taught. This is in accordance with the research proposed by (Chaiyo & Nokham, 2017) which concluded that the use of the Quizizz web-based application supports learning and increases students' concentration, engagement, fun and motivation.

Quizizz also helps them to realize their level of knowledge and facilitates understanding of concepts and enhances their learning process. The form of Quizizz which is like playing a game makes practicality and flexibility of use so that students do not feel bored in using it. Students also feel that they can learn independently thus it is suitable for large groups and small groups. Easy access in Quizizz which only enters a number code makes Quizizz easy to use. The attractive technical quality makes students want to learn and the feedback from students makes Quizizz attract students’ attention (Chaiyo & Nokham, 2017).

Learning patterns created and empowered through the Quizizz application are interactive multimedia patterns. The Quizizz application has advantages that can be easily used in addition to learning media, as well as learning evaluation materials, for example, there are data and statistical calculations of student performance, the results of which can describe the extent to which students understand the material, which will later be used as a
measurement for overall learning evaluation. Thus, it gives a new color to the teacher's evaluation and learning patterns that are fun for students. According to Nesbitt & Leacock (2019), learning evaluation will be maximized if teachers can measure student competencies carefully. One of the applications that can be used as an online test or evaluation tool is the Quizizz application. Quizizz is an online application that contains material that is packaged interactively with various themes (Aini, 2019). According to Darmaningrat et al (2018), the advantage of Quizizz is that it is easy to access, especially for teachers who are not very tech-savvy. Then in Quizizz there are also some interesting features that teachers can use in updating evaluation questions for students. Quizizz can be used as a learning evaluation because of its unique appearance and equipped with music that can make children forget that they are doing exams or tests. In addition, in the Quizizz application, images can be added according to the subjects to be evaluated. The contribution of the application of the Quizizz application in learning is expected to increase students' critical thinking, in addition to the various benefits that can be felt through the use of the Quizizz application as a learning assessment, one of which can motivate and attract students' interest to get learning in new and more fun ways so as to make students more enthusiastic about learning. Quizizz assessment must pay attention to the development and ability of students. Most teachers use assessment in the form of a written test. With the use of tests, the result is not impressive by students, thus student learning outcomes are low. Alternative use of assessment can be in the form of Quizizz as a stimulant that is "fun" but still "learning" which can refresh memory, be interesting, and give a good impression in students' brain memory. Thus, it is hoped that the use of Quizizz as an assessment medium can improve. Quizizz is a web tool for creating interactive quiz games for use in your classroom learning, for example for formative assessment. There are various other features available in the Quizizz application, which can be used as a tool for teachers to give assignments or homework. Besides doing assignments, students can feel learning that does not require hard thinking about answers, because the Quizizz application has a fresh look and is rich in fun things. A game cannot be separated from creative, innovative, adventurous, and fun elements, which in turn can foster positive motivation to learn from each student. Therefore, they can realize the ideals and goals of education in a concrete and even way. The teacher can also add an image to the background of the question and adjust the question settings according to the need of teachers (Aini, 2019).

Quizizz can be used as a good and fun learning strategy without losing the essence of ongoing learning. Even this strategy can involve active student participation from the beginning. In addition, the demands of the 4.0 industrial revolution era make various sectors of life including the education sector need to reorient in determining the direction of education policy to answer the challenges of the industrial revolution 4.0 which demands a significant and comprehensive increase in individual capacity through various efficiencies in the world of education, such as the education system that involves technology in the learning process.

Conclusion
Based on the results of the development research that has been carried out regarding the assessment on theme 8 through Quizizz as an application to evaluate learning in class IV SDN 1 Jati Indah Tanjung Bintang, the result of research can be concluded as follows: Quizizz as an application for learning evaluation activities has many features that teachers can use for learning evaluation activities, not only containing multiple choices and descriptions, as well as checklists according to the needs of the teacher. Quizizz can be used individually or in groups. This application can also be used directly or as a task/homework. Quizizz makes it easy for teachers to analyze students' questions and answers, and teachers can send quiz results to parents. Based on the results of the research, it is necessary to do several things as an effort to further utilize the product, namely the development of Quizizz-based assessments to improve critical thinking.

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