

RELEVANCE AND CHALLENGES OF IMPLEMENTING AUTHENTIC ASSESSMENT IN 21ST CENTURY LEARNING IN GLOBAL AND NATIONAL PERSPECTIVES

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ABSTRACT

Learning in the 21st century very develop rapidly, along with with development of the era of globalization that leads to to the digital era. Along with with change era that, then world education is also facing a new era, namely the era of education that is directed on digitalization. In the era of rapidly developing globalization, education faces major challenges in preparing students to face the needs and demands of the 21st century. Learning in this century does not only focus on mastering theoretical knowledge, but also 21st century skills, such as critical thinking, creativity, collaboration, and communication (4C). In response to these changes, the assessment models used in education also need to undergo a transformation. This is where the important role of authentic assessment, which aims to assess skills that are relevant to the real world, becomes increasingly important. Authentic assessment offers a more holistic approach by measuring students' ability to apply their knowledge in practical contexts, rather than simply testing memorization or theoretical understanding.

Keyword : Education, globalization, digitalization, assessment

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1. INTRODUCTION

In the era of increasingly rapid globalization, education faces major challenges in preparing students to face the needs and demands of the 21st century. Learning in this century does not only focus on mastering theoretical knowledge, but also 21st century skills, such as critical thinking, creativity, collaboration, and communication (4C) (Amrullah et al., 2023) . In response to these changes, the assessment models used in education also need to undergo transformation. This is where the important role of authentic *assessment* , which aims to assess skills that are relevant to the real world, becomes increasingly important. Authentic *assessment* offers a more holistic approach by measuring students' ability to apply their knowledge in practical contexts, rather than simply testing memorization or theoretical understanding . However, the implementation of authentic *assessment* in Indonesia still faces a number of significant challenges (Purnamasari et al., 2023) , both at the global and national levels. Although several developed countries have successfully implemented this model in their education systems, in Indonesia, many schools and educators still rely on conventional exams as the main method for assessing learning outcomes. Various factors such as exam-focused curricula, lack of training for teachers, and resistance to change are significant barriers to the implementation of authentic *assessment* (Manville et al., 2022; Sutadji et al., 2021b) . Therefore, this study is important to understand these challenges and how education policies can support changes towards learning that is more relevant to the needs of the 21st century. It is important to note that changes in authentic assessment are not only related to curriculum policies or learning methodologies, but also involve changes in educational management and leadership. In the context of 21st century education (Widana et al., 2021), leadership is not only interpreted as the ability to manage an efficient education system, but must also be able to facilitate skills-based learning, which includes social and technical skills. Effective leadership in 21st

century education requires leaders to be more responsive to rapid technological and social changes, and to have a vision to encourage more active, creative, and project-based learning. Educational leadership that promotes the implementation of authentic *assessment* focuses on creating policies that support the use of assessments that are more diverse and relevant to real-world needs (Koretsky et al., 2022). In this regard, educational leaders play a critical role in ensuring that assessment policies and practices in schools reflect broader learning goals, including the development of 21st-century skills. As a basis for this study, several educational theories can explain why the application of authentic *assessment* is very relevant in the context of 21st century learning. One of them is the constructivism theory developed by Jean Piaget and Lev Vygotsky. Piaget argued that learning is an active process in which students construct their own knowledge through experience and social interaction, while Vygotsky emphasized the importance of social context in learning. This constructivism theory is in line with the principle of authentic *assessment*, which assesses students' ability to apply their knowledge in a more practical context, not just through written exams. Therefore, authentic *assessment* can be considered a more appropriate way to assess students' ability to think critically, collaborate, and innovate skills that are very much needed in the 21st century. In addition, performance - *based learning theory* offers a more applied perspective, where learning and assessment are carried out through demonstration of real skills that are relevant to the outside world. Performance-based learning encourages students to demonstrate their understanding in more practical and authentic ways, such as through collaborative projects or assignments, which are closer to real-world challenges. Research by Black and Wiliam on *assessment for learning* also supports the importance of formative assessment, where feedback is given throughout the learning process to help students develop their skills continuously.

The authentic assessment model is in line with this principle, where assessment is not only done at the end of learning, but throughout the process to provide constructive feedback that helps students improve their understanding and skills. In addition to learning theories, the 21st-century education theory proposed by Saavedra and Opfer highlights four key skills that learners must have in this century: critical thinking, creativity, communication, and collaboration. All of these skills can be measured using authentic *assessments* that not only assess theoretical knowledge, but also students' ability to apply that knowledge in practical situations. In this case, authentic *assessments* are very relevant because they can assess students' ability to think critically, work in teams, and communicate effectively skills that are essential in the 21st-century workplace and social life. Finally, the educational leadership theory developed by Michael Fullan suggests that change in education must be driven by visionary leadership and the ability to manage change effectively. The implementation of authentic *assessment* in schools requires leadership that not only understands the importance of this assessment, but can also manage the transition from traditional assessment systems to more inclusive and relevant models to the needs of the times. With the background and theories that have been presented, it is clear that this study is very important to dig deeper into the application of authentic *assessment* in 21st century learning. Through this study, it is expected to identify various challenges and opportunities in integrating authentic *assessment* in the education system in Indonesia, as well as how educational policies and leadership can support this change. The application of authentic *assessment* will not only improve the quality of learning, but also help prepare students to face the challenges of an increasingly complex world, which requires critical thinking skills, collaboration, and creativity.

Authentic

Assessment Concept

Assessment can be defined as an assessment process that assesses students' abilities in a real-world context. Unlike traditional exams that focus more on memorization or theoretical understanding (Sutadji et al., 2021a; Wakefield et al., 2023), authentic *assessment* assesses skills that can be applied practically, such as critical thinking, problem solving, communication, and collaboration. This model places more emphasis on evaluations carried out in situations that resemble real-world challenges, allowing students to demonstrate their ability to solve problems or produce products that are relevant in the context of everyday life. Assessment was first introduced by Grant Wiggins in his book entitled "Educative Assessment: Designing Assessments to Inform and Improve Student Performance" (1998). Wiggins stated that authentic assessment should be directly related to the lives and challenges faced by students in the real world. This type of assessment focuses on measuring competencies, not just knowledge. Wiggins also emphasized that assessment should help students understand why and how the knowledge they are learning is relevant to the outside world. There are several main characteristics of authentic *assessment*, namely:

1. Connectedness to the real world
These assessments focus on real-world tasks or problems. For example, in science, authentic *assessments* might involve scientific experiments designed to test students' understanding of science concepts in more practical, applicable situations.
2. Use of Various Assessment Techniques
Assessment uses a variety of methods, such as portfolios, presentations, group projects, or reports, which allow students to demonstrate their skills in a variety of ways.
3. Skill based assessment
The main focus of authentic *assessment* is on applicable skills and abilities. These include critical thinking, collaboration, communication skills, and creativity in problem solving.
4. Constructive Feedback
This assessment not only measures the final results, but also provides useful feedback for student development. This process is ongoing and allows students to improve their work based on the feedback received.

Learning Theories that Support the Implementation of Authentic Assessment

The application of authentic *assessment* can be better understood through several relevant learning theories. These theories provide a strong basis for why skills-based assessment and personal development are essential in 21st century learning.

1. Constructivism Theory (Jean Piaget and Lev Vygotsky)

The constructivist theory developed by Jean Piaget and Lev Vygotsky emphasizes that learning is an active process in which students construct their own knowledge through direct experience. Piaget developed the concept of cognitive development that focuses on the stages of a child's intellectual development, while Vygotsky emphasized the importance of social and cultural interactions in the learning process. In the context of authentic *assessment*, constructivism theory supports the idea that students should be involved in a learning process that allows them to actively construct knowledge and skills through meaningful experiences. Therefore, authentic assessment should reflect students' ability to apply knowledge in practical situations, which is aligned with higher learning goals than just mastery of theory.

2. Performance-Based Learning Theory

This theory emphasizes that effective learning must assess students' skills through real demonstrations, not just through written tests. *Performance-based learning* focuses on assessing students' ability to demonstrate their understanding and skills in more applicable contexts. For example, in the field of art or design, students may be asked to create a work of art or a design product that demonstrates their technical skills, which is part of an authentic *assessment*. The application of this theory in authentic *assessment* provides space for students to demonstrate more complex and diverse skills, not just their ability to answer exam questions. It also provides an opportunity to assess 21st century skills, such as creativity, collaboration, and the ability to work on real projects.

3. Collaborative Learning Theory

Collaborative learning, developed by scholars such as David Johnson and Roger Johnson, emphasizes the importance of social interaction in the learning process. In this context, students learn with and from their peers, and work together to solve complex problems. This collaborative learning is relevant to authentic *assessment* because it often involves group tasks or projects that allow students to demonstrate their social, communication, and collaboration skills. Authentic collaborative assessments often involve project-based assignments that require students to work together and produce a product or solution that integrates their knowledge and skills.

4. 21st Century Skills Theory (Saavedra & Opfer)

This theory was developed by Saavedra and Opfer (2012), who stated that 21st century learning requires a focus on developing skills involving critical thinking, creativity, communication, and collaboration skills that are essential to facing the challenges of the modern world. Authentic *assessment* supports the development of these skills by providing students with opportunities to demonstrate their abilities in more dynamic and collaborative situations. In this theory, authentic *assessment* is not only about measuring academic knowledge, but also the ability of students to adapt to the ever-evolving social and technological environment. Therefore, the integration of 21st century skills in the curriculum and assessment becomes an important aspect in creating relevant and sustainable learning.

Authentic Assessment in the Context of 21st Century Education

21st century education emphasizes more applicable and complex skills compared to just mastering theoretical knowledge. Thus, authentic *assessment* has a very important role in assessing competencies that are relevant to the real world. In the context of Indonesian education, the application of authentic *assessment* can provide opportunities to measure more diverse skills, such as critical thinking, collaboration skills, problem solving, and creativity. Some of the characteristics of 21st century education are the use of technology in learning, cross-disciplinary collaboration, and the development of interpersonal skills. Therefore, authentic *assessment* needs to assess students' abilities in using technology, collaborating with peers, and adapting to rapid changes. This is in line with the development of a curriculum based on competencies and skills, not just theoretical knowledge.

Challenges in Implementing Authentic Assessment

Although authentic *assessment* offers many benefits, its application in educational practice is not without challenges. Some of the challenges faced include:

1. Limited Resources
Schools often lack the resources needed to implement authentic *assessment*, such as supportive technology, training for teachers, or sufficient time to develop complex assessment tasks.
2. Lack of Teacher Understanding
Many teachers are still accustomed to conventional assessment systems, which focus on written tests. The implementation of authentic *assessment* requires a paradigm shift in the way of thinking about assessment, which often requires professional training and support.
3. Difficulties in Measuring 21st Century Skills

While authentic *assessment* focuses on 21st-century skills, measuring skills such as creativity, collaboration, and problem-solving in real-world contexts is not easy. These assessments require clear rubrics and valid assessment tools.

2. RESEARCH METHOD

The data collection technique used is a qualitative method using questionnaires or observations. The questionnaire or questionnaire used in this study is a type of questionnaire or closed questionnaire, because respondents only need to give a mark on one of the answers that is considered correct. A research instrument is a 35 tool used by a person who conducts a study to measure a phenomenon that has occurred. The data collection instrument in this study uses a questionnaire, which is a list of statements prepared in writing that aims to obtain data in the form of respondents' answers. The Likert Scale is used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena. The Likert scale used in this study is a minimum score of 1 and a maximum score of 4, because it will be known exactly what the respondents' answers are, whether they tend to agree or disagree.

3. RESULTS AND DISCUSSION

The Relationship between Authentic Assessment and 21st Century Learning

21st century learning demands a fundamental change in the educational approach that focuses more on developing skills relevant to the demands of the modern world. In this context, authentic *assessment* emerges as one of the most relevant approaches to replace conventional assessment systems that focus more on mastering theory alone. 21st century learning emphasizes critical thinking, creativity, collaboration, and communication skills, all of which can be measured more accurately using authentic *assessment*, compared to conventional exams that often only assess memorization and theoretical understanding. Authentic assessment, which assesses students' ability to apply knowledge in real-world situations, is in line with 21st-century learning principles that focus on higher-order thinking skills and problem solving. Thus, the implementation of authentic *assessment* can be a bridge between 21st-century learning objectives and effective assessment practices. According to Saavedra and Opfer (2012), *assessment* based on 21st century skills should facilitate students' ability to adapt to a complex and rapidly changing world. Authentic *assessment*, which focuses more on the process than the end result, provides opportunities for students to demonstrate more complex and relevant skills to the outside world. Therefore, the application of authentic *assessment* not only supports students' academic development but also prepares them to face real-world challenges, which require collaborative and innovative skills.

Challenges in Implementing Authentic Assessment in the Context of Education in Indonesia

Although authentic *assessment* offers great potential in improving the quality of education, its implementation in Indonesia is not without challenges. Some of the obstacles faced in implementing this assessment model include:

1. **Lack of Understanding of Authentic *Assessment* Among Educators**
One of the biggest challenges in implementing authentic assessment is the lack of understanding and skills among educators. Many teachers are still trapped in the habit of using written test-based exams that assess theoretical knowledge, because this assessment model has long been applied in the Indonesian education system. The implementation of authentic *assessment* requires a paradigm shift in the way teachers think about assessment, which requires continuous training and professional development. Research by Black and Wiliam (1998) on assessment for learning revealed that one of the key factors for effective assessment implementation is providing adequate training for teachers. Without proper training, teachers will have difficulty developing and implementing assessments that are in accordance with the principles of authentic assessment, which assesses students' skills and application of knowledge in real contexts.
2. **Limited Resources and Infrastructure**
Another challenge in implementing authentic *assessment* is limited resources, both in terms of infrastructure and assessment tools. Authentic assessment models often require technology and resources that are not always available in all schools. In many schools in Indonesia, especially those in remote areas, the use of technology in assessment and learning is still very limited. In addition, the development of complex assessment tasks, such as group projects or portfolios, requires more time and resources, which are often not available in an already crowded education system. To address these challenges, efforts are needed to improve education infrastructure throughout Indonesia, including access to technology that supports skills-based learning and assessment. One solution that can be considered is the integration of information technology in learning and assessment that facilitates authentic *assessment*, such as the use of online learning platforms that allow students to work on projects or assignments that are relevant to the real world.
3. **Difficulties in Assessing 21st Century Skills**
Assessing 21st-century skills, such as critical thinking, collaboration, and creativity, is not an easy task. Skills-based assessments require the development of very detailed and clear rubrics, as well as evaluation mechanisms that can measure these skills objectively. Skills such as creativity and problem solving cannot be measured by conventional written tests, which usually only assess memorization or theoretical understanding. Therefore, one of the major challenges in implementing authentic *assessment* is creating a rubric that is able to measure these skills validly and reliably. Performance-based assessments, such as presentations, project reports, or team collaboration, require more complex assessment instruments and must be adjusted to the context and learning objectives to be achieved.

Opportunities for Implementing Authentic Assessment in Improving the Quality of Learning in Indonesia. Despite the challenges, the implementation of authentic *assessment* also brings a number of great opportunities that can improve the quality of learning in Indonesia. Among them are:

1. **21st Century Skills Enhancement**
With the implementation of authentic *assessment*, students are given the opportunity to develop 21st century skills directly. Project-based assessments and collaborative tasks allow students to demonstrate their ability to think critically, innovate, and work in teams. These skills are not only relevant to the world of education, but are also very much needed in the increasingly complex and collaboration- and creativity-oriented world of work. For example, in science learning, students can be tested in a more authentic way through practical experiments or projects that require them to apply scientific concepts in real-life situations. In this way, students not only memorize facts, but are also able to apply their knowledge to solve real-world problems.
2. **More Meaningful and Relevant Learning**
Learning that involves authentic *assessment* has more value because it is more relevant to students' daily lives. Real-world assignments, such as case analysis or community-based projects, will help students understand how the knowledge they are learning can be applied in a broader context. For example, in history lessons, students can be asked to conduct field research or interviews with local figures to understand historical events in a more vivid and applicable context. This will change the way students view the subject, making it more meaningful and not just limited to memorizing facts.
3. **Developing Critical Thinking and Creativity**

Assessments that assess critical thinking, analysis, and creativity skills allow students to develop their intellectual potential to the fullest. In authentic assessment-based learning, students are given the freedom to explore their ideas, ask questions, and try different approaches to solving problems. Project-based assessment or problem-based assignments provide students with opportunities to learn deeply, expand their knowledge, and think innovatively. Thus, the application of authentic *assessment* not only improves academic skills, but also helps students develop important skills they need in everyday life and the workplace.

4. CONCLUSION

The application of authentic *assessment* in 21st century learning provides many opportunities to measure skills that are relevant to real-world challenges. The various learning theories that underlie this concept, such as constructivism, performance-based learning, and collaborative learning, provide a strong foundation to support the development of more holistic and skills-based assessments. However, despite its many potentials, the implementation of authentic *assessment* faces a number of challenges that require policy support, teacher training, and the development of more effective assessment tools. The application of authentic *assessment* in 21st century learning offers great potential to improve the quality of education in Indonesia. Despite various challenges, such as lack of understanding among educators, limited resources, and difficulties in measuring 21st century skills, the opportunities offered by this assessment model are very significant. With the support of appropriate policies, intensive teacher training, and adequate infrastructure development, authentic *assessment* can be one of the best ways to prepare students to face the demands of an increasingly complex and practical skills-oriented world. The implementation of authentic *assessment* will not only improve the quality of assessment, but also enrich the learning experience of students in a more meaningful and relevant way. Therefore, it is important for education policy in Indonesia to continue to support this change, in order to realize a more holistic, innovative, and relevant education to the challenges of the 21st century.

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