

Innovative Assessment Practices in Elementary Education to Support Student-Centered Learning

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ABSTRACT

This study examines innovative assessment practices in primary education to support student-centered learning amid the demands of active and participatory learning. The research aims to analyze the contribution of innovative assessments to student learning engagement and independence. The study used a qualitative descriptive approach involving 10 elementary school teachers and 20 students selected through purposive sampling from two elementary schools. Data were collected through observation, semi-structured interviews, and document analysis, then analyzed using thematic analysis. The results of the study show that project-based assessments, peer assessments, digital portfolios, and reflective feedback are able to improve student participation, critical thinking skills, and learning independence. However, the limitations of literacy in teacher assessments and time management are still obstacles in its implementation. This study concludes that innovative assessments play an important role in strengthening student-centered learning and provide practical implications for the development of assessment strategies in primary education.

INTRODUCTION

The change in the 21st century education paradigm has driven a transformation from teacher-centered learning to student-centered learning. This approach places students as active subjects in the learning process through engagement, reflection, collaboration, and the development of critical thinking skills. In this context, assessment is no longer seen only as a tool for evaluating learning outcomes, but also as an integral part of the learning process that supports the holistic development of student competencies. Countries are beginning to develop innovative assessment practices such as project-based assessment, digital portfolios, diagnostic assessments, and reflective feedback to improve the quality of basic learning.

Globally, international education organizations emphasize the importance of authentic assessments in building 21st-century skills, including creativity, communication, collaboration, and problem-solving. The development of digital technology also encourages the integration of technology-based assessments in basic education to create more adaptive and personalized learning. Recent research shows that a student-centered approach to learning is able to significantly increase the participation and learning motivation of elementary school students. However, the implementation of innovative assessments at the elementary school level still faces various challenges, especially related to teacher readiness, limited assessment literacy, and the dominance of conventional outcome-oriented assessment practices.

In Indonesia, the implementation of the Independent Curriculum strengthens the urgency of implementing innovative assessments as part of differentiated learning and strengthening the Pancasila Student Profile. Teachers are required to develop assessments that are able to accommodate the individual needs, interests, and learning characteristics of students. However, the reality on the ground shows that some elementary school teachers still have difficulty designing contextual, reflective, and student-centered assessments. Wasito's research (2026) shows that the assessment practice of elementary school teachers still tends to focus on measuring learning outcomes rather than the student learning process. This condition indicates an urgent need to explore innovative assessment practices that are more adaptive to modern learning paradigms.

A number of previous studies have discussed the relationship between assessment and student-centered learning. Qoiriah (2025) found that a student-centered learning approach is able to increase student participation and involvement in the learning process. Meanwhile, Ximenes and da Costa (2025) emphasized that the student-centered learning strategy contributes to improving the communication competence of elementary school students. Another study by Gusmira (2025) shows that the implementation of active learning requires more flexible and reflective assessment support. However, most of the research still focuses on learning strategies and has not specifically examined innovative assessment practices in supporting student-centered learning in primary schools.

In addition, research on innovative assessments is generally more conducted at the secondary and tertiary education levels than basic education. Studies on project-based assessments conducted in elementary schools are also

still limited to aspects of learning implementation without exploring in depth how these assessments shape student involvement, reflection, and learning independence. Research on diagnostic assessments conducted in the context of adaptive learning also still shows limitations in explaining the relationship between innovative assessments and direct student learning experiences. Thus, there is a research gap in the form of limited empirical studies that specifically analyze innovative assessment practices as a supporting instrument for student-centered learning in basic education.

Based on these gaps, this research is important because student-centered learning requires an assessment system that not only measures academic achievement, but also supports an active, reflective, and meaningful learning process. Innovative assessments are believed to be able to create a more participatory learning environment through student involvement in the process of self-evaluation, collaboration, and contextual problem-solving. In addition, changes in the characteristics of the learning generation in the digital era require a transformation of assessments that are more flexible and relevant to the needs of today's elementary school students.

This study aims to analyze the implementation of innovative assessment practices in primary education and explore its contribution to strengthening student-centered learning. The focus of the research is directed at the innovative forms of assessment used by teachers, the process of their implementation in learning, and their impact on the learning engagement and independence of elementary school students. This research also seeks to identify the challenges faced by teachers in implementing innovative assessments in the primary education environment.

Theoretically, this research is expected to enrich the study of innovative assessments and student-centered learning in the context of basic education, especially related to the transformation of the assessment paradigm from assessment of learning to assessment as learning. Practically, the results of the research are expected to be a reference for teachers, schools, and education policymakers in developing assessment strategies that are more authentic, reflective, and adaptive to student needs. In addition, this research can contribute to strengthening the implementation of the Independent Curriculum through the development of assessment practices that support active and meaningful learning in elementary schools.

LITERATURE REVIEW

Student-Centered Learning in Elementary Education

Student-centered learning is a learning approach that places students as active subjects in building knowledge, not just recipients of information from teachers. In primary education, this approach is important because students are at stages of cognitive, social, and emotional development that require concrete, interactive, and meaningful learning experiences. Student-centered learning emphasizes active participation, exploration, collaboration, reflection, as well as the ability of students to take a role in their own learning process. Qoiriah (2025) explained that the implementation of student-centered learning is able to

increase student participation and involvement because the learning process provides space for students to discuss, solve problems, and express understanding more independently.

In the Indonesian context, a student-centered learning approach is increasingly relevant to the direction of the Independent Curriculum which emphasizes flexibility, differentiated learning, and competency strengthening. The learning and assessment guidelines from the Ministry of Education and Rural Development emphasize that learning and assessment are an interrelated cycle, so assessments are not only used to assess final results, but also to understand students' learning needs and improve the learning process. Thus, student-centered learning requires an assessment system that is more flexible, reflective, and able to capture students' learning progress as a whole.

The Concept of Innovative Assessment in Learning

Innovative assessment refers to the practice of assessment that is not only score-oriented or outcome-oriented, but also assesses students' processes, skills, reflection, creativity, and ability to apply knowledge. Innovative forms of assessment can be in the form of project-based assessments, authentic assessments, peer assessments, digital portfolios, formative assessments, performance rubrics, and reflective feedback. In modern learning, assessments serve as pedagogical tools to help students understand the strengths, weaknesses, and learning strategies that need to be developed.

Innovative assessments are closely related to the assessment for learning paradigm and assessment as learning. Assessment for learning places assessment as a means to improve learning through feedback, while assessment as learning emphasizes the involvement of students in monitoring, reflecting, and regulating their own learning process. Li (2024) shows that formative assessments developed through improving teacher assessment literacy can support students' self-regulated learning. This shows that innovative assessments are not only an evaluation tool, but also a strategy to form learning independence.

Project-Based Assessment as a Support for Active Learning

Project-based assessment is a form of innovative assessment that is relevant to student-centered learning because it provides opportunities for students to integrate knowledge, skills, and real experience in producing products or solutions. In basic education, project-based assessments can encourage students to work together, think critically, communicate ideas, and connect subject matter to the context of everyday life. This approach is in line with the needs of 21st century learning that emphasizes creativity, collaboration, communication, and problem-solving.

Research on differentiated project-based assessment shows that project-based assessments can reinforce contextual, authentic, and student-centered learning. This practice not only assesses the final outcome of the project, but also the planning process, student involvement, group cooperation, reflection, and problem-solving skills. Although the study was published after 2025, the findings still point to the direction of development of assessments in primary schools that increasingly emphasize differentiation, authenticity, and reflection.

In the context of this study, project-based assessment is understood as a practice that supports active participation and student learning independence.

Peer Assessment and Student Reflection

Peer assessment is an assessment strategy that involves students in providing assessment and feedback on their peers' work or performance. This practice supports student-centered learning because students are not only the object of assessment, but also are involved as assessors who learn to understand the criteria, standards, and quality of learning outcomes. Through peer assessment, students can develop communication skills, responsibility, empathy, and critical reflection.

In basic learning, peer assessment needs to be designed in a simple, structured, and age-appropriate manner. Teachers still have an important role to play in providing clear rubrics, providing examples of constructive feedback, and ensuring that the assessment process is fair and does not create social pressure. This practice is also related to self-regulated learning because students learn to compare their work with success criteria and improve their learning outcomes based on feedback from others. Therefore, peer assessment can be an important means to develop learning awareness and student involvement in the evaluation process.

Digital Portfolio as a Medium for Documentation and Learning Reflection

Digital portfolios are an innovative form of assessment that allows students to document learning processes, outcomes, and progress in digital format. Unlike conventional assessments that only assess the final product, digital portfolios provide space for students to store work, write reflections, receive feedback, and monitor learning progress over time. UNESCO (2023) emphasized that educational technology can support the quality of learning if it is used in a relevant, inclusive, and student-oriented manner.

Studies on digital portfolio assessment show that digital portfolios can be a means of reflection for students and teachers because they allow for a documented learning process in a sustainable manner. In primary education, the use of digital portfolios needs to be adjusted to students' digital literacy skills, the availability of devices, and the support of teachers and parents. With proper management, digital portfolios can strengthen student-centered learning as students are involved in selecting work, explaining the learning process, and reflecting on their achievements.

Reflective Feedback and Student Learning Engagement

Reflective feedback is an important element in innovative assessments because it helps students understand what they have mastered, what needs to be improved, and how to improve it. Effective feedback is not only correction, but also direction that encourages students to rethink, try new strategies, and improve the learning process. In student-centered learning, feedback serves as a bridge between assessment and the development of learning independence.

Anisa's research (2025) shows that formative assessments play an important role in improving self-regulated learning because they provide sustainable and constructive feedback. This is in line with the needs of basic education, where students need clear, simple, and repetitive support to understand their learning progress. Thus, reflective feedback can improve students' learning engagement, confidence, and ability to organize their own learning process.

Challenges of Implementing Innovative Assessments in Elementary Schools

Although innovative assessments have great potential, their implementation in primary schools still faces various challenges. The main challenges include limited literacy of teacher assessments, administrative burdens, limited learning time, variations in students' abilities, and limited digital facilities. Some teachers are still accustomed to using conventional assessments that focus on written tests and final grades, requiring training to design assessments that are more authentic, formative, and student-centered.

Studies of elementary school teacher assessment practices show that assessment and feedback have an important role to play in supporting meaningful learning and higher-order thinking skills, but many teachers still have difficulty designing assessments that truly support the deep learning process. Therefore, strengthening teacher competence is a key factor in the success of innovative assessments. Teachers not only need to understand assessment techniques, but also need to be able to integrate assessments with learning objectives, student characteristics, and active learning strategies.

Sintesis Literature Review

Based on the literature review, it can be concluded that innovative assessments have a strategic position in supporting student-centered learning in primary education. Project-based assessments encourage active and contextual learning; peer assessment strengthens collaboration and reflection; digital portfolios document learning progress; While reflective feedback helps students understand and improve their learning process. However, the success of the practice is highly dependent on teacher assessment literacy, school readiness, availability of time, and technological support.

This literature review shows the need to empirically examine how innovative assessment practices are applied in the context of primary schools, especially by involving the experiences of teachers and students directly. Therefore, research with a qualitative descriptive approach involving 10 teachers and 20 students is relevant to understand the form of assessment practice, the implementation process, the benefits, and the obstacles that arise in supporting student-centered learning.

METHODOLOGY

Design and Research Approach

This study uses a qualitative approach with a descriptive design to analyze innovative assessment practices in basic education and their role in supporting student-centered learning. The qualitative descriptive approach was chosen because the research focuses on the teacher-student experience, learning

interactions, and the implementation of assessments in natural learning situations.

This research focuses on assessment practices such as project-based assessment, peer assessment, digital portfolios, and reflective feedback in elementary school classrooms.

Population and Sampling Techniques

The research population consisted of primary school teachers and students who applied a student-centered learning approach. The study involved 10 teachers and 20 students from two primary schools who were selected using purposive sampling techniques. Teachers are selected based on their experience in implementing innovative assessments, while students are selected based on active involvement in learning assessment activities. The purposive sampling technique is used because it allows researchers to select participants who have relevant information according to the research objectives (Campbell et al., 2020).

Data Collection Techniques and Research Instruments

Data were collected through classroom observations, semi-structured interviews, and document analysis. Observations are carried out to observe the practice of assessment and student participation during the learning process. Interviews were used to explore the experiences and perceptions of teachers and students regarding the implementation of innovative assessments. Document analysis includes lesson plans, assessment rubrics, and student portfolios. Observation and interview guidelines were compiled based on the concepts of formative assessment and student-centered learning from previous research (Li, 2024; OECD, 2023).

To maintain the credibility of the data, research instruments are validated through expert judgment by education experts and elementary school practitioners. The validity of the data is strengthened through source triangulation and member checking techniques.

Research Procedure

The research was carried out through several stages, namely initial observation, literature study, instrument preparation, data collection, data grouping, thematic coding, data interpretation, and drawing conclusions. Observations and interviews were conducted directly during the learning process, while supporting documents were collected to reinforce the research results.

Data Analysis Techniques

The data was analyzed using thematic analysis through the stages of data reduction, coding, categorization, interpretation, and drawing conclusions (Braun & Clarke, 2021). The analysis was focused on identifying themes related to innovative assessment practices, student engagement, reflective learning, and implementation constraints. The data analysis process is supported using NVivo 14 software to make it easier to manage code and organize themes systematically.

RESEARCH RESULT

Implementation of Project-Based Assessment in Learning

The results of the observations showed that all teachers involved in the study had implemented project-based assessments as part of student-centered learning. The form of the project provided includes making educational posters, group presentations, simple mini experiments, and reports on the results of environmental observations. Teachers provide opportunities for students to determine a theme, divide group assignments, and present the results of their work in front of the class. These findings show that project-based assessments encourage students to be more actively involved in the learning process than conventional assessment methods.

Based on the results of the interviews, most students stated that project-based assessments made them more interested in learning because they could work together with friends and connect the material with their daily lives. One of the students said:

"If the project assignment is more exciting because you can do group work and present in front of the class. I have become more familiar with the material." (S-04, interview, February 12, 2026).

Other students also stated:

"I'm usually scared that the test will be written, but if the project is on my project, I can help draw and come up with ideas." (S-11, interview, February 13, 2026)

The teacher also revealed that the project assessment helps to see the students' abilities more comprehensively.

"Through the project, I was able to see students' communication skills, creativity, and cooperation that were previously not seen during regular exams." (G-02, interview, February 10, 2026)

"Students who are usually passive turn out to be more active when given group project assignments." (G-07, interview, February 14, 2026)

Of the 20 students interviewed, 16 students stated that it was easier to understand the material when learning using project assignments than regular written tests.

Table 1. Project-Based Assessment Implementation Findings

Aspects of the Findings	Research Results
Project type	Posters, experiments, presentations, observation reports
Student participation	Increased in 16 out of 20 students
Developing skills	Collaboration, communication, critical thinking
Main obstacles	Project implementation and assessment time

Peer Assessment and Student Engagement

The results of the study show that the practice of peer assessment has begun to be applied simply in both schools. Teachers use simple assessment sheets that contain indicators such as group cooperation, boldness of presentation, and the ability to express opinions. Students are asked to provide brief comments on the work of their friends using simple and positive language.

Observations show that peer assessment activities increase interaction between students during the learning process. A total of 14 students were seen

to be more active in discussing and giving responses when the group evaluation session was carried out. One of the students explained:

"I learned the good parts of my friend's tasks and the parts that could be improved." (S-08, interview, February 15, 2026)

Another student stated:

"At first I was embarrassed to give comments to friends, but over time I got used to it." (S-15, interview, February 16, 2026)

The teacher also revealed that peer assessment helps students be more responsible for the learning process.

"When students know their friends will also assess, they become more serious about doing assignments." (G-04, interview, February 15, 2026)

"Group discussions become more lively because students start to have the courage to express their opinions." (G-01, interview, February 12, 2026)

However, some students still feel hesitant to give ratings to friends for fear of offending their friends.

"Sometimes I'm afraid that my comments make friends sad." (S-03, interview, February 16, 2026)

The teacher also said that elementary school students still need intensive assistance so that peer assessment can be carried out objectively and constructively.

Table 2. Results of Peer Assessment Implementation

Indicator	Findings
Students actively discuss	14 students
Students are more confident	12 students
Main obstacles	Doubt rating friends
The role of teachers	Guiding and moderating assessments

The Use of Digital Portfolios in Learning Documentation

The results of the document analysis showed that teachers used digital portfolios to store the results of project assignments, photos of learning activities, student reflections, and weekly evaluation results. Digital portfolios are compiled using simple apps like Google Drive and Canva education. The teacher explained:

"The digital portfolio helps me see students' progress over time, not just from a single test score." (G-05, interview, February 18, 2026)

"Student assignment documentation becomes neater and easier to share with parents." (G-09, interview, February 19, 2026)

Based on the interview results, students feel more proud when their work is stored in a digital portfolio.

"I'm happy that the results of my work are included in the portfolio because it can be seen again." (S-12, interview, February 18, 2026)

"If the task is in the portfolio, I will be more enthusiastic about doing it." (S-06, interview, February 17, 2026)

However, the study also found that there are limitations in technology facilities in some students.

"Sometimes I find it difficult to open chores at home because my parents use their cellphones to work." (S-19, interview, February 20, 2026)

"The internet at home isn't always great, so sometimes it's late to collect tasks." (S-14, interview, February 20, 2026)

The teacher also revealed that digital portfolio management requires additional time in learning administration.

Table 3. Digital Portfolio Use Findings

Aspects	Findings
Media used	Google Drive and Canva
Positive impact	Increased motivation and documentation of learning
Constraints	Device and internet limitations
The number of students is experiencing obstacles	5 students

Reflective Feedback and Learning Independence

The results of the observation showed that the teacher provided verbal and written reflective feedback after the students completed the project assignment and the group presentation. The feedback provided was not only in the form of correction of answers, but also comments on the learning process, group cooperation, and task improvement strategies. One of the teachers explained:

"I try to provide constructive comments so that students know what needs to be improved, not just wrong or right." (G-03, interview, February 21, 2026)

Another teacher said:

"When given clear feedback, students are more motivated to improve on their assignments." (G-08, interview, February 22, 2026)

Most students state that feedback from teachers helps them understand mistakes and correct assignments.

"If the teacher gives me a comment, I know which part needs to be improved." (S-10, interview, February 21, 2026)

"I want to try again so that the results of the next task are better." (S-17, interview, February 22, 2026)

In addition, some students began to show simple reflection skills.

"Now I'm more thorough before collecting assignments because I'm afraid that something is missing." (S-01, interview, February 22, 2026)

"I learned from the teacher's comments so that the next presentation would be more confident." (S-09, interview, February 23, 2026)

Of the 20 students, 15 admitted that they were more confident to try again after receiving constructive feedback.

The Impact of Innovative Assessments on Student-Centered Learning

In general, the results of the study show that innovative assessment practices have a positive impact on student-centered learning. Classroom observations showed an increase in student participation in discussions, presentations, and group work. Students seem to be more active in asking questions, expressing opinions, and being involved in the learning evaluation process. The teacher stated:

"Classes become more active than when they only use regular written tests." (G-06, interview, February 24, 2026)

"Students seem more confident in conveying ideas when learning uses projects and discussions." (G-10, interview, February 24, 2026)

Students also express changes in their learning experience.

"Now learning is more fun because it's not just doing problems." (S-18, interview, February 25, 2026)

"I prefer group learning because I can ask friends." (S-05, interview, February 25, 2026)

However, the study found that the implementation of innovative assessments has not been running optimally in all classes. The main obstacles found include limited literacy of teacher assessments, management of learning time, and limited technology facilities in several schools.

"Sometimes it's hard to divide time between teaching material and doing project assessments." (G-01, interview, February 26, 2026)

"Creating an appropriate assessment rubric for all students is still a challenge." (G-05, interview, February 26, 2026)

Table 4. Summary of the main findings of the study

Theme Findings	Key Results
Project-based assessments	Increase student participation and collaboration
Peer assessment	Increase interaction and confidence
Digital portfolio	Supports documentation and reflection learning
Reflective feedback	Helping students' learning independence
Implementation constraints	Assessment literacy, time, and technology facilities

Differences in Findings with Previous Research

The results of this study show that innovative assessments not only increase student learning engagement, but also strengthen the ability to reflect and learn independently in elementary school students. These findings differ from some previous studies that have highlighted increased participation and learning motivation without exploring the process of student reflection in depth. In addition, this study found that the use of digital portfolios in primary education still faces significant obstacles to access to technology.

"Not all students have access to their own devices at home." (G-07, interview, February 27, 2026)

The findings show that the success of innovative assessments is strongly influenced by the readiness of school facilities and the support of students' learning environments.

DISCUSSION

The results show that the application of innovative assessments through project-based assessments, peer assessments, digital portfolios, and reflective feedback has a positive impact on student-centered learning. Key findings show that project-based assessments are able to increase student participation, collaboration, communication, and active involvement in the learning process. Of the 20 students interviewed, 16 students stated that they had an easier time understanding the material when learning using project assignments compared to regular written tests. This shows that project-based assessments not only serve as a tool for evaluating learning outcomes, but also as a pedagogical strategy that encourages students to build understanding through experience, cooperation, and contextual problem-solving. These findings are in line with the concept of authentic assessment, which is an assessment that emphasizes students' involvement in real tasks that reflect daily life situations. Research by Widiana et al. (2022) also shows that project-based assessments can improve learning outcomes because students not only remember the material, but also apply knowledge in meaningful activities.

Theoretically, these results can be explained through the constructivist learning theory approach, which places students as active subjects in building knowledge. In the context of this study, students not only receive information from the teacher, but also construct understanding through group discussions, poster making, simple experiments, presentations, and observation reports. Thus, project-based assessments reinforce the principle of student-centered learning because the assessment process is no longer one-way, but rather part of the learning experience itself. These findings are also reinforced by recent research showing that project-based assessments are more authentic, practical, and student-centered than conventional assessments.

The second finding shows that peer assessment increases student interaction, confidence, and responsibility in the learning process. A total of 14 students were seen to be more active in discussing and giving responses when the group evaluation session was carried out. This shows that peer assessment can create a more dialogical learning space, as students learn to assess, comment, and receive input from their peers. In the perspective of formative assessment, peer assessment serves as a feedback mechanism between students that helps them understand the quality of work criteria and improve learning outcomes. Sugiarti (2026) emphasized that peer feedback in basic education can support student involvement, revision ability, and understanding of the quality of assignments if teachers provide clear directions and assessment criteria.

However, the study also found that some students are still hesitant to give ratings to friends for fear of offending. These findings show that peer assessment

in elementary school students cannot be completely detached from the role of teachers. Teachers are still needed as facilitators, moderators, and supervisors so that student comments remain objective, positive, and constructive. In other words, the success of peer assessment is not only determined by the existence of assessment instruments, but also by the social-emotional readiness of students and the ability of teachers to build a safe evaluation culture. This is an important differentiator from previous research that often emphasized the benefits of peer assessment, but lacked the psychological barriers of students in giving assessments to peers.

The third finding shows that the use of digital portfolios helps teachers document student learning progress more systematically. Digital portfolios are used to store project assignments, activity photos, student reflections, and weekly evaluations. Students also feel more proud and motivated when their work is stored in a digital portfolio. Conceptually, the digital portfolio supports the principle of assessment as learning, because students are not only assessed by teachers, but are also invited to look back at their development from time to time. Martínez-Monterrubio (2024) shows that digital portfolios can be a pedagogical tool to strengthen reflective practices in elementary schools.

However, the results of the study also show that there are obstacles to access to technology. A total of 5 students experienced obstacles due to limited devices and internet quality at home. This finding has an important consequence, namely that technology-based assessment innovations do not automatically create equitable learning if they are not followed by infrastructure readiness. In the context of primary education, the use of digital portfolios needs to be designed in an inclusive manner, for example by providing access time at school, using a simple platform, or combining digital portfolios with print portfolios. Thus, the contribution of this research not only shows the benefits of digital portfolios, but also emphasizes the importance of fair access in the implementation of digital assessments.

The fourth finding suggests that reflective feedback from teachers helps improve students' learning independence. As many as 15 out of 20 students stated that they were more confident to try again after receiving constructive feedback. The teacher not only provides correct or false corrections, but also comments on the learning process, cooperation, and task improvement strategies. These findings are in line with the theory of self-regulated learning, which emphasizes students' ability to understand mistakes, organize learning strategies, and improve performance independently. Anisa's (2025) research shows that formative assessment plays an important role in improving self-regulated learning because it provides continuous feedback that helps students manage their learning process.

The important meaning of these findings is that innovative assessments are able to shift the orientation of assessment from just measuring learning outcomes to fostering the learning process. When students are given projects, assess friends, build portfolios, and receive reflective feedback, they not only learn to earn grades, but also learn to understand their processes, mistakes, responsibilities, and self-development. This is the main contribution of this

research to the development of education, which is to strengthen the understanding that assessment in 21st century learning should be positioned as an integral part of the learning process, not just as the final activity after learning is completed.

However, the implementation of innovative assessments in this study has not been fully optimal. The main obstacles include the limitation of teacher assessment literacy, the management of learning time, the difficulty of compiling appropriate rubrics, and the limitation of technological facilities. These obstacles show that assessment innovation requires systemic readiness, not just teacher creativity in the classroom. Teachers need training on rubric preparation, feedback techniques, peer assessment strategies, and digital portfolio management. In addition, schools need to provide basic technology support so that digital portfolios do not widen the learning gap between students.

Thus, this research makes a theoretical and practical contribution. Theoretically, this study expands the study of student-centered assessment by showing that innovative assessments can strengthen the involvement, reflection, collaboration, and learning independence of elementary school students. In practical terms, this study provides an idea that teachers can implement innovative assessments through simple strategies such as group projects, peer assessment sheets, digital documentation, and reflective feedback. However, the implementation must be adjusted to the readiness of students, the availability of time, and the condition of school facilities.

For follow-up research, it is recommended that subsequent studies use mixed methods or quasi-experimental designs so that the impact of innovative assessments on learning outcomes can be measured more robustly. Subsequent research may also involve a wider number of schools and students, comparing schools with different levels of technological facilities, as well as developing innovative assessment rubric models that match the characteristics of elementary school students. In addition, follow-up studies need to examine the role of parents in supporting digital portfolios and project-based learning at home, especially in the context of schools with limited devices and internet access.

CONCLUSIONS AND RECOMMENDATIONS

This research shows that innovative assessment practices through project-based assessments, peer assessments, digital portfolios, and reflective feedback are able to support student-centered learning in primary education. The implementation of innovative assessments has been proven to increase student participation, collaboration, communication skills, reflection, and learning independence. Students become more actively involved in the learning process, more confident in expressing opinions, and more motivated to improve learning outcomes after obtaining constructive feedback. The findings of the study also show that innovative assessments not only function as a tool for evaluating learning outcomes, but also as pedagogical strategies that support more meaningful and contextual learning experiences. However, the implementation of innovative assessments still faces various obstacles, such as limited literacy of

teacher assessments, management of learning time, and limited technology facilities for some students and schools.

Based on the results of the research, teachers and schools are advised to improve assessment competence through training related to authentic assessment, rubric preparation, reflective feedback, and the use of learning technology. Schools also need to provide more adequate digital infrastructure support so that the implementation of digital portfolios can run in an inclusive and effective manner. In addition, the implementation of innovative assessments should be carried out gradually and adjusted to the characteristics of elementary school students so that the learning process remains conducive, collaborative, and oriented towards 21st century competency development. Thus, innovative assessments can be an important part of strengthening the implementation of student-centered learning in primary education.

ADVANCED RESEARCH

Further research is suggested using a mixed methods or quasi-experimental approach to measure the influence of innovative assessments on student learning outcomes in a more in-depth and measurable manner. Subsequent studies could also involve more schools with different facility conditions, as well as explore the role of parents, students' digital literacy, and school technology readiness in supporting the implementation of innovative assessments in primary education.

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