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Authentic Assessment for Holistic Learning: Evaluating the Implementation of Formative Practices in Indonesian CBE Classrooms

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ABSTRACT: This study examines the implementation of alternative assessment practices in Indonesian primary schools within the Competency Based Education (CBE) framework. Guided by the Merdeka Belajar policy, the research focuses on how portfolios, performance tasks, and student-led reflections are integrated into classroom instruction. A qualitative dominant mixed methods design was employed, involving document analysis, observations, interviews, and rubric based performance scoring in three schools representing urban, rural, and remote (3T) contexts. Findings show that alternative assessments enhance engagement, critical thinking, and communication skills when supported by project-based learning and clear rubrics. Digital tools, especially the Platform Merdeka Mengajar (PMM), enabled real-time feedback and differentiated instruction in digitally equipped schools. However, challenges such as teacher workload, rubric inconsistency, and limited digital infrastructure in rural and 3T areas affected implementation fidelity. Teachers with higher assessment literacy were more consistent in applying formative practices and leveraging assessment data for instructional decisions. The study concludes that sustained implementation of alternative assessments requires systemic support including professional development, collaborative planning structures, and equitable access to digital tools. These practices are essential for realizing the goals of CBE and promoting inclusive, student centered learning environments. The research contributes to policy discourse on assessment reform and offers practical insights for teachers, school leaders, and curriculum designers.

Keywords: Alternative Assessment, Competency Based Education, Formative Assessment, Primary Education, Indonesia, Education Policy, Digital Tools.

INTRODUCTION

In recent years, Indonesia has undergone significant educational reform aimed at realigning its national education system with global standards and the demands of the 21st century. At the core

of this transformation is Competency Based Education (CBE), which shifts focus from content delivery to the development of critical thinking, creativity, communication, and collaboration. The Merdeka Belajar (Freedom to Learn) policy supports this shift by promoting flexible, student-centered learning and emphasizing formative assessments that reflect real-world outcomes (Hasibuan et al., 2023). These reforms seek to counterbalance traditional, test centric approaches and provide learners with opportunities to engage in deeper, more meaningful learning activities.

The Merdeka Belajar policy is not an isolated initiative; it operates in tandem with other frameworks such as the Indonesian Qualification Framework (IQF), which articulates competency standards across educational levels and disciplines (Suyadi et al., 2021). This alignment helps to create coherence in educational practices and ensures that learning objectives are not only relevant but also measurable in terms of student readiness for higher education and employment. Within this policy ecosystem, assessment is repositioned as an integral part of instructional design rather than a summative endpoint. This strategic reconfiguration mandates that teachers collect authentic evidence of student learning continuously and use this data to adapt instruction, personalize learning pathways, and improve educational outcomes (Kardoyo & Pitaloka, 2023).

Despite this supportive policy environment, the operationalization of Competency Based Education in Indonesian primary schools (Sekolah Dasar, SD) remains uneven. In urban centers, schools may benefit from better infrastructure, access to digital tools, and professional development opportunities. In contrast, schools in rural and 3T (terdepan, terluar, tertinggal) areas often struggle with limited resources, low teacher training capacity, and minimal technological support. These disparities have created a fragmented landscape where the potential of alternative assessments is only partially realized, thus calling for a systematic inquiry into how these tools are implemented across diverse educational contexts.

Alternative assessments refer to a range of evaluative strategies that go beyond traditional standardized testing. They include performance based tasks, portfolios, formative assessments, student led conferences, and reflective journals, all of which are designed to capture students' progress over time in ways that are contextually relevant and instructionally informative (Misbah et al., 2019). These assessments support the principles of authentic assessment by emphasizing real world application, student agency, and iterative feedback processes (Caretta-Weyer & Gisondi, 2019). When integrated effectively, they not only measure student learning but also enhance it by creating opportunities for metacognition, self regulation, and deeper engagement.

Globally, there is increasing momentum toward the use of formative and authentic assessments as part of a broader shift to learner centered education. Many countries are investing in digital tools such as e portfolios and online learning management systems that allow for flexible, personalized assessment practices. These tools facilitate collaborative learning, peer feedback, and real time progress monitoring, thereby aligning assessment more closely with instructional goals (Gil & Petry, 2016). Indonesia has taken steps in this direction through the development of platforms like the Platform Merdeka Mengajar (PMM), which enables teachers to access resources, design assessments, and track student learning using digital evidence. However, uptake of such tools

varies widely and is often constrained by contextual factors such as internet connectivity and digital literacy.

The positioning of assessment within the Merdeka Belajar policy reflects a broader pedagogical shift. Assessments are no longer conceived as tools solely for grading or accountability; rather, they are embedded in the teaching learning cycle and serve as instruments for enhancing student learning (Hasibuan et al., 2023). Teachers are encouraged to employ assessments formatively, using student data to guide instruction, identify learning gaps, and adjust pedagogical strategies. This approach demands high levels of assessment literacy among teachers, including skills in designing rubrics, interpreting student data, and providing constructive feedback. Unfortunately, many teachers especially in under resourced contexts have not received sufficient training in these areas, which undermines the effective implementation of alternative assessments (Kardoyo & Pitaloka, 2023).

Numerous challenges hinder the widespread adoption of alternative assessment practices in Indonesian primary schools. Among these are the lack of professional development opportunities, insufficient instructional resources, and resistance to departing from traditional assessment paradigms. Teachers often face increased workloads when tasked with managing portfolios, analyzing rubric based tasks, and providing individualized feedback (Febyola et al., 2023). Moreover, technological limitations in remote areas make it difficult to implement digital assessment platforms or collect reliable data. These issues are further exacerbated by institutional inertia and unclear expectations about how to balance alternative and standardized assessments within existing curriculum structures (Ghufron, 2023).

Despite these obstacles, a growing body of empirical research suggests that alternative assessments can significantly enhance student learning outcomes in CBE contexts. Studies indicate that students who engage with formative assessment practices demonstrate improved mastery of competencies and greater motivation to learn. These effects are particularly strong when assessments are personalized and provide timely, actionable feedback (Febyola et al., 2023). The findings are consistent with global trends advocating for competency based instruction and underscore the potential of alternative assessments to support holistic student development.

This study is situated within the broader discourse on assessment reform and seeks to contribute empirical insights into the implementation of alternative assessments in Indonesian primary schools. By conducting a multi site case study across urban, rural, and 3T contexts, the research aims to map current practices, identify enabling and inhibiting factors, and evaluate the extent to which these assessments impact student competency development. The study also examines how digital platforms and assessment literacy influence implementation fidelity.

The novelty of this study lies in its focus on the intersection between national policy, teacher practice, and contextual realities. Unlike previous research that often isolates either policy discourse or classroom dynamics, this study bridges macro level policy frameworks with micro level instructional practices. It offers a comprehensive perspective on how alternative assessments are operationalized in diverse school environments and provides evidence based recommendations

for enhancing assessment practices under the Merdeka Belajar framework. The scope includes both cognitive competencies (e.g., literacy and numeracy) and socio emotional domains (e.g., collaboration, empathy), thereby aligning with the broader goals of the Profil Pelajar Pancasila.

In sum, this chapter has outlined the policy context, theoretical framework, and practical challenges associated with alternative assessment in Indonesian primary schools. It has highlighted the significance of CBE and the critical role of authentic, formative assessment practices in achieving its objectives. By situating the study within both national and global discourses, the chapter establishes a compelling rationale for the research and underscores its potential contributions to educational policy and practice in Indonesia.

METHOD

This study employed a multi site, mixed methods case study design to explore how alternative assessments are implemented within Competency Based Education (CBE) frameworks in Indonesian primary schools. The qualitative strand served as the dominant method, supported by quantitative data collection on rubric based student performance. The multi site approach allowed for an in depth investigation across diverse educational contexts urban, rural, and remote (3T) and facilitated the identification of both common patterns and context specific variations. This design aligns with best practices for educational case studies, which emphasize the importance of purposeful site selection, data triangulation, and contextual interpretation to ensure transferability and analytical rigor (Amin et al., 2023).

Three primary schools were purposively selected based on geographic and infrastructural diversity, using the AN (Asesmen Nasional) profile data as a reference point. These included: (1) an urban school in Jakarta with high digital access and active use of the Platform Merdeka Mengajar (PMM); (2) a rural school in Central Java with moderate infrastructure; and (3) a 3T school in Papua characterized by minimal digital access and strong local language use.

Participants included school principals, 4–6 classroom teachers per school (representing Phases A–C of the Kurikulum Merdeka), two student cohorts per site, and parent/community representatives. The sampling strategy sought to ensure diversity in instructional practice, grade level, and stakeholder perspective.

To capture a holistic view of assessment practices, multiple data sources were employed:

1. Document Analysis**:** Teaching modules (RPP), P5 project rubrics, assessment portfolios, and classroom summary sheets were reviewed to identify embedded assessment strategies.
2. Structured Observations**:** Classroom sessions were observed using rubric aligned checklists focusing on performance tasks, feedback practices, and student engagement.
3. Interviews and Focus Group Discussions (FGDs)**:** Conducted with teachers, students, and parents to elicit perceptions of alternative assessment effectiveness, usability, and equity.

4. **Optional Teacher Survey:** Administered to measure assessment literacy using a validated scale, with indicators for purpose, design, feedback application, and interpretation.

The use of multiple methods aligns with recommendations for comprehensive educational case studies, allowing for both within case depth and cross case comparability (Maitland et al., 2018).

Data were stored securely with standardized coding and digitized checklists to ensure consistency. Data collectors received training, including rubric calibration and mock observations, to enhance inter-rater reliability. Regular team meetings supported protocol adherence across sites (Chen et al., 2021; Thorlacius et al., 2019).

Rubric based scores were analyzed to assess student growth in critical domains (e.g., critical thinking, creativity, collaboration, and communication). Descriptive statistics were used to report mean pre and post scores for each domain and school.

To evaluate inter rater reliability, a two way random effects model of the Intraclass Correlation Coefficient (ICC) was employed. At least three raters assessed 30% of the student samples using identical rubrics to determine scoring consistency. Following Koo and Li's benchmarks, ICC values above 0.75 were considered indicative of strong reliability (Kocakülah, 2022; Nakkaew & Adunyarittigun, 2019). This approach supports psychometric integrity in rubric based educational assessment.

Qualitative data from interviews, FGDs, and observation field notes were analyzed using thematic content analysis. Coding was conducted both inductively and deductively using a modified framework approach. Key themes related to implementation fidelity, stakeholder perceptions, assessment challenges, and enabling factors were identified. Data were analyzed both within and across cases to ensure thematic depth and analytic breadth.

Stakeholder review sessions were conducted periodically to validate emerging themes and interpretations, enhancing the credibility of findings through collaborative reflection (Corresp et al., 2020).

Informed consent was obtained from all participants. Anonymity and confidentiality were ensured through pseudonymization of data. Ethical clearance was secured from the institutional review board affiliated with the lead researcher. Data were stored securely and used solely for academic purposes.

The choice of a multi site mixed methods case study was driven by the need to capture contextually rich, practice based insights into the implementation of alternative assessments. The integration of quantitative data on student performance and reliability provided a structured layer of validation, while qualitative analysis allowed for an in depth understanding of how policy translates into practice across school types. Such a methodological blend is particularly well suited for exploring classroom level innovations in CBE settings (Ayed et al., 2022; Beshara et al., 2022).

RESULT AND DISCUSSION

Implementation Patterns

Alternative assessment practices varied across school contexts: urban (SD01), rural (SD02), and 3T (SD03). In SD01, teachers used digital tools such as the Platform Merdeka Mengajar (PMM) to provide real-time feedback and monitor competencies (Rosnelli & Ristiana, 2023; Utama et al., 2023). PMM usage allowed teachers to embed formative assessment within daily instructional plans, streamlining the documentation of project outputs and enhancing student engagement with digital platforms (Zulfayani et al., 2023).

In SD02, the rural school integrated alternative assessments primarily through project based learning (PBL). Teachers utilized clear rubrics aligned with learning objectives to structure student tasks. The integration of self and peer assessment activities promoted metacognitive reflection and student ownership (Handayani, 2023; Jahring & Haidar, 2023). However, feedback loops were inconsistently applied, and digital integration was limited.

SD03, a 3T school in Papua, applied assessment practices through oral presentations and community projects. Limited digital access and lack of rubrics reduced documentation quality and scalability (Kamal & Sumardi, 2023). School leadership played an instrumental role in fostering a supportive environment for alternative assessments, particularly in SD01, where principals actively facilitated professional development and resource allocation (Banawi et al., 2022; Faqih et al., 2023).

Competency Gains

Quantitative analysis of student rubric scores revealed notable improvements across competency domains. In SD01, students demonstrated substantial gains in critical thinking and creativity, attributable to the structured use of performance tasks and portfolios (Ridwan et al., 2023; Rohmah et al., 2022). Collaborative project formats encouraged creativity and problem solving (Gusteti et al., 2023).

In SD02 and SD03, growth was evident but varied based on assessment fidelity. In literacy and numeracy, formative assessment methods such as observational checklists and feedback cycles enabled ongoing monitoring of student progress(Rini et al., 2021). Student engagement was higher when feedback was timely and aligned with their learning goals (Syaifuddin, 2022).

Table 2: Rubric Scores Pre–Post by School Type

School	Competency Domain	Pre Mean	Post Mean	Mean Gain	ICC
SD01	Critical Thinking	2.3	3.5	1.2	0.89
SD01	Creativity	2.4	3.4	1.0	0.87
SD02	Creativity	2.0	2.9	0.9	0.82

School	Competency Domain	Pre Mean	Post Mean	Mean Gain	ICC
SD02	Communication	2.1	3.0	0.9	0.81
SD03	Communication	1.8	2.7	0.9	0.77
SD03	Collaboration	2.0	2.8	0.8	0.76

Scoring tools included both holistic and analytic rubrics. Analytic rubrics provided fine grained insight into specific competencies and helped teachers deliver more targeted feedback (Fadiana et al., 2023; Gunawan et al., 2023). Interpreting gains involved triangulating rubric scores with student reflections and teacher observations (Arianty et al., 2021). Contextual factors significantly shaped outcomes: urban schools benefitted from digital and human resources, while rural and 3T schools relied on culturally relevant pedagogy and community engagement to offset infrastructure limitations (Palinussa et al., 2023; Prihandoko, 2021).

Stakeholder Perspectives

Teachers across all sites acknowledged the pedagogical value of alternative assessments but cited challenges such as time constraints and documentation burden (Mellyzar et al., 2023). Concerns were raised regarding maintaining reliability and validity, especially when implementing assessments without standardized supports (Hikamudin et al., 2023).

Students expressed appreciation for self assessment opportunities and greater clarity about their learning progress. In SD01, student led conferences improved communication and goal setting (Deda et al., 2023). Parents, especially in SD02 and SD03, required clear communication about assessment formats. Teachers played a crucial role in explaining the purpose and benefits of alternative assessments through structured dialogues and parent meetings (Džumhur et al., 2021).

Challenges with portfolio documentation included workload, subjectivity in scoring, and student anxiety over performance consistency (Cahyana et al., 2023; Puspitaningtyas & Jasmina, 2023). Enablers of sustained use included leadership support, professional development, and peer collaboration. Schools that promoted innovation, offered regular training, and encouraged experimentation reported higher teacher confidence and assessment fidelity (Santia & Handayani, 2023).

Assessment Literacy and Implementation Fidelity

The findings from this multi site case study reveal that embedding alternative assessments into Competency Based Education (CBE) practices can significantly enhance student learning outcomes across diverse Indonesian primary school contexts. However, the implementation fidelity of such assessments is influenced by multiple interacting factors, including teacher capacity, school infrastructure, digital tools, and institutional culture. Among these, assessment literacy

emerged as a critical determinant in the successful and sustainable adoption of alternative assessment practices.

Teachers who demonstrated a higher understanding of assessment concepts such as formative feedback, rubric design, performance evaluation, and metacognitive reflection were consistently more effective in applying these practices within their classrooms. They could align assessments with instructional goals and student needs, resulting in improved student engagement and learning depth. This observation aligns with a growing body of literature emphasizing the role of assessment literacy in promoting valid and reliable classroom assessments(Bond et al., 2020; Earle & Turner, 2020). Furthermore, teachers in urban and some rural schools who had access to targeted professional development reported increased confidence in using tools like PMM to embed assessments into instructional planning, supporting a continuous feedback loop and reflective pedagogical practices (Thayer et al., 2022).

By contrast, in 3T schools with limited access to training and digital tools, teachers often reverted to traditional summative approaches. The absence of sufficient assessment literacy led to fragmented implementation, with teachers either avoiding alternative assessment entirely or improvising without structured support. This variation underscores the importance of ensuring equity in access to professional learning and capacity building, especially in under resourced settings. Assessment literacy, therefore, is not just a technical skill but a foundational competence for any educator in a CBE framework.

Systemic Supports and Scalability

Systemic supports are central to scaling effective assessment practices across Indonesia's diverse educational landscape. Scaling effective assessment practices across Indonesia requires systemic support. Sustained teacher training in designing, implementing, and interpreting alternative assessments is pivotal for maintaining fidelity and ensuring long-term impact (Wolf & López, 2022).

Collaboration among educators, supported through teacher learning communities, peer mentoring, and co teaching models, was found to enhance consistency in rubric interpretation and implementation. Such collaboration also built collective confidence and shared professional language around assessment. Importantly, these practices helped reduce inconsistencies in assessment outcomes by fostering a culture of transparency and peer accountability. School leadership played a critical role in establishing and nurturing these collaborative practices. Leaders who actively promoted innovation and reflection by providing time, space, and recognition for professional dialogue were instrumental in embedding alternative assessments as part of daily teaching routines (Pratt, 2016).

Beyond the school level, policy coherence and system wide alignment are required to ensure sustainability. Without ongoing support from local education authorities and relevant ministries, efforts to scale alternative assessments may remain localized and unsustainable.

Policy Alignment and Curricular Integration

Policy frameworks must support both standardization and contextual flexibility to enable meaningful integration of alternative assessments into classroom practices. While the alignment of Permendikbudristek No. 21/2022 with Merdeka Belajar represents an important step, gaps remain in translating these frameworks into actionable guidelines at the school level. Teachers reported challenges in navigating between curriculum expectations and actual classroom realities, particularly when guidance on implementing alternative assessments was vague or overly generic.

In order to effectively integrate alternative assessments into national curricula, policymakers should ensure clear articulation of learning outcomes, assessment expectations, and support mechanisms. Additionally, accountability systems must evolve to recognize a broader range of student competencies. Overreliance on standardized testing as the primary metric of educational quality may discourage innovative assessment practices. Instead, a balanced approach that incorporates portfolio reviews, project based evaluations, and student reflections could provide a more holistic measure of learning progress (Cobb & Jackson, 2021).

Flexibility in curriculum implementation is also essential. Teachers should be empowered to design assessments that reflect local contexts, languages, and cultural assets while aligning with national learning standards. This approach respects diversity and improves relevance, particularly in regions like Papua and other 3T areas.

Role of Digital Platforms in Promoting Equity

Digital platforms such as PMM have proven to be transformative in enabling equitable access to formative assessment tools. These platforms allow for real time monitoring of student progress, offer templates for rubric based scoring, and house digital portfolios that track longitudinal learning growth. Teachers can customize tasks, provide instant feedback, and differentiate instruction based on student needs capabilities that are particularly valuable in large or multi level classrooms (Hasson et al., 2023).

However, disparities in access to infrastructure remain a major obstacle to equitable implementation. Urban schools with reliable internet and access to devices benefited from smoother adoption and greater integration of digital assessment tools. Conversely, rural and 3T schools struggled to consistently engage with these platforms, limiting their capacity to collect, analyze, and use assessment data effectively. Addressing this digital divide requires policy interventions that prioritize infrastructure development and targeted support for low resource areas (Goforth & Pham, 2023).

Additionally, digital platforms should be continuously improved to support culturally responsive pedagogy and inclusive assessment designs. Providing user interfaces in local languages and offering offline functionalities can enhance accessibility and relevance, especially for diverse student populations.

Stakeholder Engagement and Cultural Shifts

Alternative assessments have the potential to reshape classroom culture by promoting student agency, self reflection, and collaborative learning. The study found that students appreciated the transparency and ownership that came with self assessment, peer evaluation, and project presentations. These practices supported metacognitive growth and helped students better understand learning objectives.

Parents, initially skeptical or unfamiliar with non traditional assessment models, responded positively when teachers engaged them through dialogue and shared assessment artifacts. In many cases, parent teacher conferences became opportunities for educators to explain assessment criteria, present student portfolios, and discuss learning progress in meaningful ways. This engagement was particularly successful in contexts where schools had a communication strategy in place and included parents as partners in the learning process (Deda et al., 2023; Džumhur et al., 2021).

Importantly, stakeholder involvement contributed to shifting school culture from a compliance oriented system to one focused on developmental learning. Such cultural shifts are foundational for long term change.

Challenges and Sustainability Considerations

Despite these promising developments, several challenges persist. Teachers consistently expressed concern over the workload associated with designing, implementing, and documenting alternative assessments. Portfolio assessment and project evaluations, while pedagogically rich, were seen as time consuming and resource intensive. Without appropriate support such as digital tools for streamlining data entry, administrative assistance, or adjusted teacher workloads there is a risk of burnout and implementation fatigue.

Furthermore, inconsistent rubric interpretation and limited calibration exercises among teachers contributed to reliability concerns, particularly in schools lacking strong professional learning communities. In some cases, students also reported feeling pressure to constantly produce high quality artifacts, leading to anxiety and reduced willingness to take creative risks. Addressing these issues will require targeted interventions, including time allocation for assessment related tasks, training in rubric design and use, and school wide protocols for moderation.

CONCLUSION

This study analyzed how alternative assessments are implemented within Competency Based Education (CBE) in Indonesian primary schools across urban, rural, and 3T contexts. Findings show their potential to promote student-centered learning, improve competency outcomes, and advance equitable education reform.

Future research should investigate the long-term impacts of alternative assessments and explore scalable models that involve teacher input, community participation, and adaptive technologies. Continued investment in inclusive and sustainable strategies is essential to make alternative assessments a practical reality in all Indonesian schools.

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