Al-Ishlah: Jurnal Pendidikan
Vol.17, 3 (September, 2025), pp. 4888-4900
ISSN: 2087-9490 EISSN: 2597-940X, DOI: 10.35445/alishlah.v17i3.7946

Implementing the *Merdeka Belajar* Policy through Deep Learning: A Case Study in Social Studies Education in Bima Regency

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ARTICLE INFO

Keywords:

Merdeka Belajar;
deep learning;
social studies;
Bima regency;
critical thinking skills

Article history:

Received 2025-06-08
Revised 2025-07-11
Accepted 2025-09-29

ABSTRACT

This study examines the effectiveness of Indonesia's *Merdeka Belajar* (Freedom to Learn) policy through the implementation of deep learning strategies in Social Studies education within Bima Regency, a socio-economically constrained region. The policy promotes student-centered learning, autonomy, and contextual relevance—principles that align closely with deep learning pedagogy. A qualitative multiple case study design was employed in two junior high schools. Data were collected through in-depth interviews with ten teachers and thirty students, twenty-four classroom observations, and analysis of planning documents and student work samples. Thematic analysis was conducted using an inductive-deductive coding approach to identify patterns related to student engagement, critical thinking, and pedagogical transformation. Findings revealed a substantial increase in student engagement, with 90% actively participating in group discussions and 70% successfully formulating solutions to social problems. Student feedback indicated strong preference for project-based learning (73%) and the *Merdeka Belajar* model (83%). Teachers reported increased student motivation, though only 70% demonstrated full understanding of the curriculum's core principles. Document analysis showed partial integration of local context and 21st-century competencies. Key barriers included inadequate digital infrastructure and limited teacher training. These results suggest that the integration of *Merdeka Belajar* and deep learning can effectively foster critical thinking and participatory learning in under-resourced settings. However, successful and sustainable implementation requires systemic support through infrastructure investment and targeted professional development.

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1. INTRODUCTION

The rapid evolution of global education necessitates pedagogical approaches that cultivate critical thinking, creativity, and adaptability among students (Cobo, 2013). This educational transformation has led systems worldwide to move beyond traditional models of knowledge transmission toward more humanizing and emancipatory practices (Yamin & Syahrir, 2020). In this context, Indonesia's Merdeka Belajar (Freedom to Learn) policy marks a substantial paradigm shift—from teacher-centered to student-centered learning—emphasizing learner autonomy and instructional flexibility.

At the heart of effective student-centered education lie theoretical frameworks that support meaningful and transformative learning experiences. Social constructivism, which posits that knowledge is co-constructed through social interaction and situated within specific contexts, underpins many progressive pedagogical practices (Vygotsky & Cole, 1978). Recent studies describe social constructivism as "a collaborative form of learning based on interaction, discussion, and knowledge sharing among students," where "learners work together in groups sharing ideas, finding answers to problems, or just creating something new to add to existing knowledge" (Akpan et al., 2020).

Building upon this theoretical base, deep learning has emerged as a pedagogical approach that prioritizes conceptual understanding, meaningful connections, and real-world application over rote memorization (Miller & Krajcik, 2019). It enables students to grasp not only academic content but also its relevance to their futures and its practical utility in everyday life (Kemendikbud, 2025). Contemporary research reinforces the role of constructivism in supporting deep learning by providing a framework through which learners actively construct knowledge based on prior experiences. It also underscores the importance of interactive and meaningful learning environments that facilitate knowledge integration (Le & Nguyen, 2024). The effectiveness of deep learning, however, is influenced by multiple factors, including students' cognitive abilities, prior knowledge, mental preparedness, and the teacher's competence in classroom management and instructional decision-making (Geng et al., 2023).

The theoretical distinction between surface and deep learning, first articulated by Marton and Saljo (1976), provides crucial insight into learning quality. While surface learning emphasizes rote memorization and reproduction of information, deep learning involves intention to understand, seeking underlying principles, and integrating new knowledge with existing understanding. This framework has been instrumental in understanding how students engage with academic content and has significant implications for pedagogical design. Fullan et al. (2017) further developed this understanding through their framework of six global competencies fostered by deep learning: character, citizenship, collaboration, communication, creativity, and critical thinking—competencies essential for 21st-century success. Additionally, Hattie's (2019) extensive meta-analyses demonstrate that deep learning approaches consistently produce higher effect sizes on student achievement compared to surface learning methods, with particular effectiveness in developing higher-order thinking skills and meaningful cognitive engagement.

The integration of *Merdeka Belajar* with deep learning approaches shows promise for educational transformation. Hunaepi et al. (2024) found that *Merdeka Belajar* initiatives positively influence student engagement and learning outcomes by promoting autonomy and integrating 21st-century skills. International evidence supports this, showing that "student-centered teaching approaches prioritize the needs, interests, and learning styles of students, fostering an environment where they take an active role in their education" and effectively address limitations of traditional methods that "might not adequately prepare students for the complex challenges they'll face in their future careers" (Bhardwaj et al., 2025). However, significant implementation challenges persist, particularly in resource-constrained regions where inadequate infrastructure and limited teacher preparedness create barriers to effective policy implementation (Hadi et al., 2023; Tobondo, 2024).

These challenges are particularly acute in Social Studies education, which inherently demands critical understanding of social, historical, economic, and geographical phenomena. Despite Social Studies' potential for fostering critical thinking and social awareness (Brophy, 1990), many schools in peripheral regions like Bima Regency continue relying on conventional methods emphasizing

memorization over meaningful engagement. Such approaches inhibit active student involvement, suppress critical thinking development, and disconnect learning from students' social realities.

While existing research has examined *Merdeka Belajar* implementation in urban contexts with adequate resources, few studies have examined how deep learning supports *Merdeka Belajar* implementation in under-resourced areas. The integration of these two approaches specifically within Social Studies education in geographically and economically disadvantaged regions remains underexplored, creating a significant gap in understanding contextual implementation strategies.

This study aims to evaluate the effectiveness of *Merdeka Belajar* policy through deep learning implementation in Social Studies education within Bima Regency. Specifically, the research seeks to: (1) assess how this integration enhances student engagement and critical thinking skills, (2) examine the development of contextual understanding of Social Studies content, and (3) identify implementation barriers and potential solutions in resource-limited contexts.

This research contributes to the theoretical understanding of how progressive educational policies can be effectively implemented in challenging contexts while providing practical insights for educators and policymakers seeking to enhance Social Studies education quality in under-resourced regions. The findings will inform adaptive pedagogical strategies that bridge the gap between educational innovation and contextual realities in Indonesian education.

2. METHODS

2.1 Research Design and Approach

This research employs a qualitative approach with a multiple case study design to deeply understand the implementation of the *Merdeka Belajar* policy through deep learning approaches in Social Studies education within Bima Regency (Creswell, 2012). This approach was chosen because it allows researchers to holistically explore experiences, perceptions, and learning practices in real and complex educational environments while providing rich, contextual understanding of pedagogical implementation in under-resourced areas. The case study design enables comprehensive examination of the phenomenon within its natural context, facilitating deep analysis of how educational policies translate into classroom practices and student outcomes.

2.2 Research Setting and Participants

The study was conducted at two junior high schools in Bima Regency that have implemented the *Merdeka Belajar* policy and integrated deep learning strategies in Social Studies instruction. Schools were selected using purposive sampling based on criteria of active *Merdeka Belajar* implementation and willingness to participate in the research. SMPN 1 Bolo (designated as School A) and SMPN 2 Bolo (designated as School B) were chosen as research sites due to their demonstrated commitment to implementing progressive pedagogical approaches and their accessibility for sustained research engagement.

The research involved ten Social Studies teachers and thirty students across both schools. Table 1 below summarizes the participant distribution and selection criteria across both research sites.

Table 1. Participant Summary

School Code	School Name	Teachers (n)	Students (n)	Teacher Selection Criteria	Student Selection Criteria
School A	SMPN 1 Bolo	5	15	Min. 2 years' experience, active Merdeka Belajar implementation	Random selection from classes with ≥1 semester deep learning exposure
School B	SMPN 2 Bolo	5	15	Active Merdeka Belajar implementation, Social Studies specialization	Diverse grade representation (VII-IX), ≥1 semester exposure
Total		10	30		

Teacher participants were specifically selected based on their direct involvement in Social Studies instruction using deep learning approaches, while student participants were randomly selected from classes that had experienced these pedagogical methods for at least one semester to ensure they had sufficient exposure to the learning approaches being studied.

2.3 Data Collection Methods

Three complementary data collection techniques were employed to ensure a comprehensive understanding of the research phenomenon. In-depth semi-structured interviews were conducted with all ten Social Studies teachers and thirty students, with each interview lasting approximately 45-60 minutes. These interviews focused on exploring participants' experiences, perceptions, challenges, and perceived benefits of the integrated *Merdeka Belajar* and deep learning approach. The interview guide was designed to elicit detailed responses about pedagogical practices, student engagement patterns, and implementation barriers.

Classroom observations constituted the second major data collection method, involving twenty-four observation sessions conducted over eight weeks, with twelve sessions at each school. These observations utilized a structured checklist specifically designed to record indicators of student engagement, including active participation, demonstrations of critical thinking, and collaborative learning behaviors. Each observation session lasted the duration of a complete Social Studies lesson, typically 80 minutes, allowing for comprehensive documentation of classroom dynamics and pedagogical interactions. During each session, all students present in the classroom (averaging 30 students per session) were observed and their behaviors recorded, providing a comprehensive picture of engagement patterns across the entire class.

Document analysis formed the third component of data collection, examining Learning Implementation Plans (RPP), student work samples and assessment rubrics, as well as teacher reflection journals and planning documents. A total of six RPPs were collected and analyzed (three from each school), selected based on their representation of different grade levels and topics within the Social Studies curriculum. Additionally, fifteen student work samples were systematically collected to represent the diversity of output formats produced through the *Merdeka Belajar* approach, including posters, essays, digital projects, and multimedia presentations. This documentary evidence provided insight into the planning processes, assessment strategies, and reflective practices that support the implementation of *Merdeka Belajar* and deep learning approaches.

2.4 Data Analysis

Data analysis followed Braun and Clarke's (2006) six-phase thematic analysis approach using a hybrid inductive-deductive coding strategy. The analysis began with data familiarization through transcription and repeated reading of all data sources, including interview transcripts, observation notes, and collected documents. Initial coding employed both deductive codes derived from existing

theoretical frameworks related to *Merdeka Belajar* and deep learning principles—such as "student autonomy," "critical thinking development," and "contextual learning"—as well as inductive codes that emerged organically from the data itself, including concepts like "infrastructure challenges," "peer collaboration benefits," and "assessment anxiety reduction."

A specific example of this hybrid coding process involved analyzing a student interview excerpt where a participant stated, *"Sekarang saya lebih berani bertanya kepada guru karena tidak takut salah lagi, dan teman-teman juga saling membantu"* (Now I am braver to ask questions to the teacher because I am no longer afraid of being wrong, and friends also help each other). This statement was coded deductively as [Student Confidence] and [Peer Support] based on theoretical expectations, while also generating the inductive code [Fear Reduction in Learning Environment], which emerged from the data pattern. These codes subsequently contributed to the broader theme of "Enhanced Student Engagement and Psychological Safety." The subsequent phases involved grouping codes into potential themes, reviewing these themes against the entire dataset, and refining theme definitions to ensure they accurately captured the essence of participants' experiences.

Quantitative aspects of classroom observations were systematically analyzed using frequency-based coding matrices where each observation session was segmented into five-minute intervals, creating standardized time units for behavioral analysis. Within each interval, individual student behaviors were categorized and coded as: (A) Actively Engaged—demonstrating active participation through questioning, discussion, or hands-on activities; (P) Passively Engaged—listening attentively but not actively participating; or (D) Disengaged—showing inattention, distraction, or off-task behavior. For engagement indicators presented in the results, percentages were calculated based on the total number of students observed across all sessions. For example, if 22 out of 30 students consistently demonstrated active questioning behavior across multiple observation sessions, this yielded a 73.3% engagement rate for that specific indicator. Inter-rater reliability was established through dual coding of 25% of observations by two independent researchers, achieving a Cohen's κ coefficient of 0.82, indicating substantial agreement between coders and ensuring consistency in behavioral categorization.

2.5 Validity and Reliability Measures

Multiple strategies were employed to ensure the validity and reliability of research findings. Triangulation was implemented across three dimensions, including source triangulation through gathering multiple participant perspectives from both teachers and students, method triangulation by combining interviews, observations, and document analysis, and investigator triangulation through involving multiple researchers in data collection and analysis processes. Member checking was conducted by providing participants with interview transcripts and preliminary findings to verify accuracy and seek clarification on interpretations.

Additional validation measures included peer review by an external researcher who examined coding consistency and theme development, prolonged engagement through six to eight weeks of intensive data collection to ensure sufficient depth of understanding, and thick description providing detailed contextual information to enable readers to assess the transferability of findings to similar educational contexts.

2.6 Ethical Considerations

Comprehensive ethical protocols were established and maintained throughout the research process. Institutional approval was obtained from the relevant ethics committee and local education authorities before commencing data collection. Written informed consent was secured from all teacher participants, while parental consent and student assent were obtained for minor participants. All

participants were clearly informed of their voluntary participation status and their right to withdraw from the study at any time without consequences.

Confidentiality protection measures included anonymizing school identities using alphabetic codes (School A and School B), employing pseudonyms for all participants in research reporting, and implementing secure data storage protocols with access limited exclusively to the research team. Audio recordings were destroyed following transcription and verification to protect participant privacy. All data handling procedures adhered to institutional data protection policies, ensuring that sensitive information remained secure and confidential throughout the research process and beyond.

2.7 Implementation Timeline

The research was conducted across a ten-week period, systematically organized into distinct phases to ensure thorough data collection and analysis. The preparation phase during weeks one and two involved securing ethics approval, coordinating with participating schools, and piloting research instruments to ensure their effectiveness and appropriateness for the research context. The intensive data collection phase spanned weeks three through six, during which classroom observations were conducted, interviews were scheduled and completed, and relevant documents were collected from both participating schools.

The initial analysis phase during weeks seven and eight focused on transcription of interview recordings, preliminary coding of observational data, and member checking activities to validate initial interpretations. The final analysis phase in weeks nine and ten concentrated on comprehensive theme development, validation of findings through triangulation methods, and preparation of the research report. This structured timeline ensured systematic progression through all research phases while maintaining the depth and rigor necessary for quality qualitative research in educational settings.

3. FINDINGS AND DISCUSSION

3.1. Result

The implementation of *Merdeka Belajar* policy integrated with deep learning approaches in Social Studies education at SMPN 1 Bolo and SMPN 2 Bolo revealed significant transformations in teaching and learning practices. Through comprehensive data collection involving classroom observations, interviews, and document analysis over eight weeks, four major themes emerged from the research findings: enhanced student engagement and participation, critical thinking development, teacher perceptions and pedagogical shifts, and infrastructure and resource challenges.

3.1.1 Enhanced Student Engagement and Participation

The integration of *Merdeka Belajar* with deep learning strategies resulted in a remarkable transformation of student participation patterns, shifting from passive reception to active engagement in learning processes. Classroom observations documented substantial increases in various engagement indicators, with 90% of students actively participating in group discussions, 80% displaying enthusiasm in learning activities, and 73.3% consistently asking or answering questions during lessons. These behavioral changes represent a fundamental departure from traditional passive learning models toward more interactive and collaborative approaches.

Table 2. Classroom Observation of Student Engagement

No	Student Engagement Indicator	Observed Frequency	Percentage (%)
1	Actively asking/answering questions	22	73.3%
2	Involved in group discussions	27	90%
3	Showing enthusiasm in learning	24	80%
4	Actively using learning materials	20	66.7%

Student interview data strongly corroborated these observational findings, with 90% of students reporting increased learning engagement and 87% expressing greater interest in Social Studies material. The consistency between observational data and student self-reporting strengthens the validity of these engagement findings and demonstrates the effectiveness of the integrated approach in fostering active learning environments.

One eighth-grade student articulated this transformation: *"Now I enjoy learning Social Studies more, because we don't just memorize place names or dates of historical events, but discuss issues that are actually happening around us."* This statement encapsulates the fundamental shift from mechanical memorization to meaningful contextual understanding that characterizes the success of deep learning strategies in making education more relevant and engaging for students.

3.1.2 Critical Thinking Development

The implementation of deep learning approaches within the *Merdeka Belajar* framework demonstrated a significant impact on students' higher-order thinking capabilities. Classroom observations revealed that 70% of students successfully formulated solutions to social problems, 66.7% effectively related theoretical material to daily life contexts, and 63.3% expressed opinions based on logical arguments. These findings indicate that students are not merely absorbing information but actively processing and applying knowledge to real-world scenarios.

Table 3. Classroom Observation of Critical Thinking Skills

No	Critical Thinking Indicator	Observed Frequency	Percentage (%)
1	Expressing opinions based on logical arguments	19	63.3%
2	Formulating solutions to social problems	21	70%
3	Relating material to daily life	20	66.7%

The development of critical thinking skills was further evidenced through analysis of student work products, which demonstrated a paradigm shift from passive consumption to active knowledge production. Student works revealed sophisticated analytical capabilities, with 40% producing posters addressing local social issues and 26.7% creating argumentative essays with logical evidence. These products required students to synthesize information, develop positions, and present coherent arguments—all essential components of deep learning and 21st-century competencies.

A teacher observed this transformation in student capabilities: *"Students now don't just accept what they read in textbooks. In our recent lesson about environmental issues, they questioned the data, searched for additional sources, and even challenged some government policies. They're becoming real critical thinkers who can analyze problems from multiple perspectives."* This observation highlights how deep learning approaches successfully foster analytical thinking and intellectual independence among students.

Table 4. Analysis of Student Work Products (n=15)

No	Type of Work / Indicator	Number of Works	Percentage (%)
1	Posters about local social issues	6	40%
2	Argumentative essays with logical evidence	4	26.7%
3	Digital maps based on data and technology	3	20%
4	Video projects about tolerance and social values	2	13.3%

The diversity in work formats illustrates the flexibility inherent in the *Merdeka Belajar* approach, accommodating different learning styles and preferences while moving away from standardized assessment methods toward more personalized and authentic evaluation approaches.

3.1.3 Teacher Perceptions and Pedagogical Shifts

Teacher interviews revealed significant pedagogical transformation alongside varying levels of readiness and understanding regarding *Merdeka Belajar* implementation. While 90% of teachers reported increased student participation and 80% successfully adopted project-based approaches, only 70% demonstrated clear understanding of the basic curriculum principles, indicating the need for continued professional development support.

Table 5. Teacher Perspectives on Implementation (n=10)

Assessment Aspect	Number of Teachers	Percentage (%)
Understanding basic principles of Merdeka Curriculum	7	70%
Admitting difficulties in practical implementation	6	60%
Using project approach in learning	8	80%
Experiencing limitations in technological facilities	5	50%
Reporting increased student participation	9	90%

Analysis of Learning Implementation Plans (RPP) demonstrated varying degrees of deep learning integration across different planning components. While 100% of RPPs contained 21st-century competency-based learning objectives and 83.3% included student analysis activities, only 50% integrated local context and current social issues, revealing a significant gap in connecting learning content to students' immediate environments.

Table 6. Deep Learning Integration in RPPs (n=6)

Integration Indicator	RPPs Meeting Criteria	Percentage (%)
Contains 21st-century competency-based learning objectives	6 of 6	100%
Includes student analysis/investigation activities	5 of 6	83.3%
Contains project-based activities or case studies	4 of 6	66.7%
Integrates local context and current social issues	3 of 6	50%

Teachers demonstrated strong commitment to pedagogical innovation despite facing implementation challenges. One Social Studies teacher explained the complexity of their situation: *"We want to implement more complex project-based learning such as making documentary videos about local culture, but we are constrained by limited facilities and internet access."* This statement reflects both the ambitious vision teachers hold for their practice and the practical constraints that limit optimal implementation of deep learning approaches.

3.1.4 Infrastructure and Resource Challenges

Despite the positive outcomes in student engagement and learning, the implementation of *Merdeka Belajar* with deep learning approaches faced significant structural challenges that constrained optimal realization of the program's potential. Teacher interviews revealed that 50% experienced limitations in technological facilities and 60% admitted difficulties in practical implementation, highlighting the infrastructure gaps that persist in under-resourced educational contexts.

The impact of resource limitations was particularly evident in student work distribution, where simpler formats like posters (40%) dominated over more technologically complex projects like videos (13.3%). While this distribution partly reflects student preferences and skill levels, it also indicates how resource constraints shape the range of possible learning experiences and limit opportunities for sophisticated multimedia learning.

These infrastructure challenges represent critical barriers that require systematic attention to fully realize the transformative potential of the *Merdeka Belajar* and deep learning integration. The impact of resource limitations extends beyond technical constraints to affect the scope of possible learning experiences, as one student reflected: *"Sometimes we have great ideas for projects, like creating interactive presentations or researching online about global issues, but we can't do them because our school doesn't have*

enough computers or stable internet. It makes us feel limited in showing what we can really do." This student perspective reveals how infrastructure gaps not only constrain technical possibilities but also affect student motivation and self-efficacy in demonstrating their full potential.

3.1.5 Synthesis of Findings

The integration of *Merdeka Belajar* with deep learning strategies demonstrated substantial potential for transforming Social Studies education in Bima Regency, successfully enhancing student engagement, developing critical thinking capabilities, and fostering pedagogical innovation among teachers. The consistency between observational data, student feedback, and teacher reports strengthens confidence in these positive outcomes while also revealing implementation challenges that require continued attention. The research findings suggest that progressive educational policies can achieve meaningful improvements even in resource-constrained environments, though addressing infrastructure limitations remains crucial for optimizing their transformative impact on teaching and learning practices.

3.2 Discussion

This research examined the implementation of *Merdeka Belajar* policy through deep learning strategies in Social Studies education within Bima Regency, revealing both promising outcomes and significant challenges that warrant careful analysis within existing theoretical frameworks and contemporary educational contexts. The findings provide nuanced insights into how progressive educational policies translate into practice in under-resourced settings, contributing to our understanding of educational transformation in challenging environments.

3.2.1 Theoretical Alignment and Extension

The research findings demonstrate substantial alignment with established theoretical frameworks while revealing contextual variations that extend existing understanding of deep learning implementation. The observed increase in student engagement, particularly the 90% active participation in group discussions and 80% enthusiasm in learning, strongly supports Marton and Saljo's (1976) conceptualization of deep learning as an approach that actively involves students in understanding concepts and seeking meaning from material. However, this study extends their theoretical model by demonstrating how policy-driven implementation can achieve similar engagement outcomes even in resource-constrained environments, suggesting that deep learning principles retain their effectiveness across diverse socio-economic contexts.

The development of critical thinking skills observed in this research—evidenced by 70% of students formulating solutions to social problems and 66.7% relating material to daily life—aligns closely with Fullan et al.'s (2017) framework of six global competencies developed through deep learning: character, citizenship, collaboration, communication, creativity, and critical thinking. The student work analysis revealing 40% engagement with local social issues and 26.7% production of argumentative essays demonstrates the development of multiple competencies simultaneously, particularly citizenship and critical thinking. This finding extends Fullan's framework by showing how subject-specific implementation in Social Studies can serve as a particularly effective vehicle for developing these competencies due to the discipline's inherent focus on social analysis and civic engagement.

Nevertheless, the research also reveals limitations in theoretical application that merit consideration. While Hattie's (2019) work suggests that deep learning fosters meaningful cognitive engagement, the relatively lower percentages in some indicators—such as 63.3% expressing logical arguments and 66.7% actively using learning materials—suggest that theoretical ideals may face practical constraints in implementation. This gap between theoretical potential and observed outcomes

indicates that contextual factors significantly mediate the effectiveness of deep learning approaches, requiring more nuanced theoretical models that account for implementation variability.

3.2.2 Unique Contributions and Contextual Insights

This study makes several distinctive contributions to the literature through its specific focus on rural Social Studies education and the intersection of curriculum reform with pedagogical innovation. The rural setting of Bima Regency provides insights rarely captured in educational research, which predominantly focuses on urban contexts with adequate infrastructure support. The finding that meaningful learning transformation can occur despite technological limitations—evidenced by high engagement rates even when 50% of teachers report facility constraints—challenges assumptions about the prerequisites for educational innovation and suggests greater resilience in pedagogical approaches than previously recognized.

The Social Studies focus offers unique insights into how discipline-specific characteristics influence deep learning implementation. The subject's inherent connection to social realities appears to facilitate the integration of local contexts, as evidenced by students' ability to connect theoretical concepts to daily life and engage with community issues. However, the document analysis revealing that only 50% of lesson plans integrate local contexts suggests that this natural advantage is not automatically realized, requiring deliberate pedagogical effort to activate the subject's contextual potential.

The combination of curriculum reform (*Merdeka Belajar*) with specific pedagogical strategies (deep learning) provides a unique lens for understanding educational transformation. Unlike studies examining either policy change or pedagogical innovation in isolation, this research demonstrates how these elements interact in practice. The finding that 100% of lesson plans contain 21st-century competency objectives while only 66.7% include project-based activities suggests that policy goals translate more readily into planning documents than into pedagogical practices, highlighting the complexity of comprehensive educational reform.

Significantly, this study reveals the mediating role of teacher readiness in policy implementation. While 90% of teachers reported increased student participation, only 70% demonstrated clear understanding of basic curriculum principles, and 60% admitted practical implementation difficulties. This disconnect between observed outcomes and teacher confidence suggests that successful implementation may occur through intuitive pedagogical adjustment rather than deep theoretical understanding, a finding that has important implications for professional development approaches.

3.2.3 Implementation Challenges and Policy Implications

The research identified several critical implementation challenges that have significant implications for both policy development and practical application. The infrastructure limitations experienced by 50% of teachers represent more than technical constraints; they fundamentally shape the scope of possible learning experiences and affect student motivation. The student quote reflecting frustration about being "limited in showing what we can really do" reveals how resource gaps can undermine the psychological benefits of progressive pedagogy, creating tension between raised expectations and constrained capabilities.

The pedagogical preparation gap, evidenced by 60% of teachers admitting implementation difficulties despite 80% adopting project-based approaches, suggests a critical disconnect between policy intentions and teacher readiness. These finding challenges conventional assumptions about teacher resistance to change, indicating instead that teachers may embrace new approaches while lacking the systematic support needed for effective implementation. The policy implication is clear: successful educational reform requires comprehensive support systems that address both theoretical understanding and practical implementation skills.

However, the research also reveals counterpoints that complicate straightforward policy recommendations. The success of student engagement despite teacher uncertainty suggests that some aspects of deep learning may be more intuitive or transferable than anticipated, potentially reducing the magnitude of required professional development. Additionally, the variation in lesson plan quality—ranging from 100% inclusion of competency objectives to only 50% integration of local contexts—indicates that implementation occurs selectively rather than comprehensively, suggesting that teachers make strategic choices about which elements to prioritize given their constraints.

The findings raise important questions about the sustainability of observed improvements. While the research documented positive short-term outcomes, the underlying infrastructure and training challenges suggest potential limits to long-term effectiveness. The teacher observation that "*We want to implement more complex project-based learning... but we are constrained by limited facilities*" indicates that initial enthusiasm may encounter increasing frustration as teachers attempt more sophisticated implementations.

3.2.4 Critical Analysis and Alternative Explanations

The research findings must be interpreted within the context of several potential alternative explanations that may influence the observed outcomes. The Hawthorne effect—where participants modify behavior due to awareness of being observed—may partially explain the high engagement rates documented in classroom observations. Teachers and students aware of participating in research examining innovative practices may demonstrate increased enthusiasm and participation that might not be sustained in routine practice.

Additionally, the self-selection bias inherent in the participating schools may limit generalizability. Schools willing to participate in research examining progressive pedagogical approaches likely possess characteristics—such as administrative support, teacher motivation, or student readiness—that predispose them to successful implementation. This selection effect may inflate the apparent effectiveness of the interventions and underestimate the challenges that would be encountered in broader implementation.

The research duration of eight weeks, while sufficient for documenting initial changes, provides limited insight into the sustainability of observed improvements. Educational innovations often demonstrate initial positive effects that may diminish as novelty wears off or as implementation challenges accumulate over time. The long-term trajectory of these interventions remains an open question requiring longitudinal investigation.

3.2.5 Implications for Theory and Practice

This research contributes to theoretical understanding by demonstrating how established frameworks for deep learning operate within specific contextual constraints while revealing the mediating effects of policy implementation processes. The findings suggest that theoretical models of deep learning may require greater attention to contextual factors and implementation variability to maintain relevance across diverse educational settings.

For practice, the research provides evidence that meaningful educational transformation can occur even within resource-constrained environments, offering hope for progressive pedagogy in challenging contexts. However, it also reveals the critical importance of comprehensive support systems that address both infrastructure needs and teacher development requirements. The success of student engagement despite implementation challenges suggests resilience in pedagogical approaches while highlighting the need for realistic expectations and sustained support in educational reform efforts.

4. CONCLUSION

This research provides compelling evidence for the effectiveness of integrating *Merdeka Belajar* policy with deep learning approaches in Social Studies education within Bima Regency, validating key theoretical frameworks, including Marton and Saljo's surface-deep learning distinction, Fullan's six global competencies, and Hattie's findings on cognitive engagement. The study demonstrated successful transformation of student engagement patterns, with 90% actively participating in group discussions and 70% developing critical thinking skills through problem-solving activities. However, significant implementation challenges emerged, including infrastructure limitations affecting 50% of teachers and practical implementation difficulties reported by 60% of educators, confirming that sustainable educational transformation requires systematic approaches addressing both pedagogical innovation and contextual constraints in resource-limited environments.

To optimize implementation effectiveness, teachers require comprehensive professional development focusing on project-based learning design, technology integration strategies, and collaborative learning communities that enable peer support and contextual adaptation. Policymakers must prioritize digital infrastructure investment, systematic teacher training funding, and flexible implementation guidelines that account for local resource realities rather than uniform national standards. School leaders should develop instructional leadership capabilities, implement resource optimization strategies through community partnerships, and establish teacher support systems, including collaborative planning time and recognition programs that sustain pedagogical innovation while addressing implementation challenges constructively.

Future investigations should pursue longitudinal studies tracking the sustainability of engagement improvements over multiple academic years, cross-disciplinary expansion examining deep learning implementation across mathematics, sciences, and language arts, and comparative regional studies analyzing implementation patterns across diverse geographical and socio-economic contexts within Indonesia. Additionally, research should investigate optimal teacher development models comparing intensive workshops, mentoring programs, and collaborative learning communities, while conducting student outcome tracking to understand long-term impacts on academic performance, critical thinking development, and civic engagement. These research directions would address current study limitations while advancing theoretical understanding of how progressive educational policies can serve as catalysts for paradigmatic change toward more adaptive, inclusive, and transformative educational systems in challenging contexts.

Acknowledgments: The authors would like to express their sincere gratitude to STKIP Harapan Bima, Indonesia, for providing institutional support and research facilities that made this study possible. Special appreciation is extended to the principals, teachers, and students of SMPN 1 Bolo and SMPN 2 Bolo for their enthusiastic participation, cooperation, and valuable insights throughout the data collection process. Their openness in sharing experiences and perspectives regarding the implementation of *Merdeka Belajar* policy and deep learning strategies in Social Studies education has been instrumental in the success of this research. Without their dedicated involvement and commitment to educational improvement, this study would not have been achievable.

Conflicts of Interest: The authors declare no conflict of interest.

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