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COMPARATIVE ANALYSIS OF THE MERDEKA CURRICULUM AND DEEP LEARNING IN ISLAMIC EDUCATION AND CHARACTER EDUCATION AT MIDDLE SCHOOL

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ABSTRAK

Penelitian ini mengkaji efektivitas komparatif antara Kurikulum Merdeka dan pendekatan Deep Learning (Mindful, Meaningful, Joyful Learning) dalam pembelajaran Pendidikan Agama Islam (PAI) dan Budi Pekerti (BP) di SMPN 1 dan SMPN 2 Sungai Beremas. Perbandingan ini penting untuk memahami bagaimana perbedaan orientasi pedagogis dalam kerangka kurikulum nasional yang sama dapat memengaruhi hasil belajar, praktik pembelajaran, dan keterlibatan siswa. Penelitian ini menggunakan desain metode campuran (mixed methods) dengan melibatkan 245 siswa dan 12 informan kunci. Analisis kuantitatif menunjukkan adanya perbedaan yang signifikan secara statistik antara kedua sekolah (nilai $p = 0,015 < 0,05$), dengan SMPN 2 memperoleh nilai rata-rata yang lebih tinggi dan lebih homogen. Sementara itu, temuan kualitatif memberikan pemahaman yang lebih mendalam mengenai faktor-faktor kontekstual yang melatarbelakangi hasil tersebut. SMPN 1 menunjukkan keunggulan dalam pemanfaatan infrastruktur digital untuk mendukung pembelajaran, sedangkan SMPN 2 memperlihatkan ketahanan pedagogis yang kuat melalui penerapan pendekatan kontekstual berbasis kearifan lokal untuk mengatasi keterbatasan fasilitas. Selain itu, penelitian ini mengidentifikasi keterbatasan alokasi waktu pembelajaran (3 jam per minggu) sebagai faktor penghambat utama, khususnya yang memengaruhi efektivitas program tahfiz dan penerapan metode Problem-Based Learning. Secara keseluruhan, temuan penelitian menunjukkan bahwa efektivitas Deep Learning lebih dipengaruhi oleh kualitas interaksi pembelajaran dan kreativitas guru dibandingkan oleh ketersediaan fasilitas fisik.

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Keywords:

Merdeka Curriculum, Deep Learning, Islamic Religious Education, Character Education, Junior High School

ABSTRACTS

This study investigates the comparative effectiveness of the Merdeka Curriculum and the Deep Learning approach (Mindful, Meaningful, Joyful Learning) in the teaching of Islamic Religious Education (PAI) and Character Education (BP) at SMPN 1 and SMPN 2 Sungai Beremas. The comparison is significant in understanding how different pedagogical orientations within the same national curriculum framework influence learning outcomes, instructional practices, and student engagement. Using a mixed-methods design, the study involved 245 students and 12 key informants. Quantitative analysis revealed a statistically significant difference between the two schools ($p\text{-value } 0.015 < 0.05$), with SMPN 2 achieving a higher and more homogeneous average score. In contrast, qualitative findings provided deeper insight into the contextual factors behind these results. SMPN 1 demonstrated strengths in leveraging digital infrastructure to support learning, whereas SMPN 2 exhibited strong pedagogical resilience by applying a contextual approach rooted in local wisdom to address limited facilities. Furthermore, the study identified limited instructional time allocation (3 hours per week) as the primary inhibiting factor, particularly affecting the effectiveness of the tahfiz program and the implementation of Problem-Based Learning methods. Overall, the findings suggest that the effectiveness of Deep Learning is shaped more by the quality of instructional interaction and teacher creativity than by the availability of physical facilities.

A. INTRODUCTION

The quality of education in Indonesia continues to face structural and pedagogical challenges, particularly regarding students' depth of understanding. Findings from the Programme for International Student Assessment (PISA) consistently indicate that a large proportion of Indonesian students have not achieved minimum proficiency levels in reading literacy, numeracy, and scientific reasoning². These results suggest that learning practices in many schools remain dominated by surface learning—characterized by memorization and procedural understanding—rather than deep conceptual mastery. This condition signals the urgent need for a paradigm shift toward deeper, more reflective, and meaningful learning experiences.

In response to this learning crisis, the Indonesian government introduced the Merdeka Curriculum as a strategic educational reform. The curriculum seeks to transform learning by prioritizing essential competencies rather than excessive content coverage. It provides flexibility for teachers to design contextual and student-centered instruction while allowing learners sufficient time to explore core concepts substantively³. This reform aligns with the broader global commitment to the Sustainable Development Goals (SDGs), particularly Goal 4, which emphasizes inclusive, equitable, and quality education for all³.

² R Azima, W Santoso, dan S Pratama, "The State of Indonesian Education: A PISA-based Analysis on Literacy and Numeracy," *Indonesian Journal of Education Research* 41, no. 2 (2023): 234–46; I Zuariah, S Hasanah, dan I. Naufal, "Shallow Learning in Indonesian Schools: A Critical Review of PISA Results," *Journal of Educational Reform* 28, no. 3 (2024): 112–20.

³ N Muhajjalina, "Implementing Merdeka Curriculum in Indonesian Secondary Schools: A Focus on Islamic Education," *Indonesian Education Journal* 44, no. 55 (2025): 201–15.

Within the framework of SDG 4, education is expected not only to produce measurable academic achievement but also to cultivate critical thinking, character development, and social responsibility. The Merdeka Curriculum addresses these multidimensional goals through the Pancasila Student Profile, which integrates moral values, citizenship, collaboration, creativity, and critical reasoning⁴. Thus, the curriculum reform is not merely administrative but represents a structural transformation aimed at enhancing both equity and quality in Indonesian education.

A central pedagogical orientation of the Merdeka Curriculum is Deep Learning. Conceptually, deep learning contrasts with surface learning by emphasizing meaning-making, higher-order thinking, and authentic problem-solving. Fullan defines deep learning as the process through which students develop the 6Cs—character, citizenship, collaboration, communication, creativity, and critical thinking—as core competencies for future readiness⁵. These competencies reflect the integration of cognitive, social, and moral dimensions of learning.

The operationalization of deep learning within Indonesian national policy is articulated through the principles of Meaningful, Mindful, and Joyful Learning (MMJ). Meaningful Learning encourages the connection of subject matter with students' lived experiences and real-world contexts. Mindful Learning promotes reflective awareness, metacognition, and ethical sensitivity. Joyful Learning creates a safe, motivating, and participatory classroom climate that supports intrinsic motivation⁶.

Theoretically, Meaningful Learning is grounded in constructivist learning theory, particularly Ausubel's notion that new knowledge becomes durable when connected to prior understanding. Mindful Learning draws from reflective pedagogy and socio-emotional learning frameworks that emphasize self-regulation and ethical awareness. Joyful Learning aligns with motivational theory, particularly self-determination theory, which highlights autonomy, competence, and relatedness as drivers of engagement. Together, these principles form an integrated pedagogical framework that supports holistic student development.

Relevance to Islamic Religious Education (PAI) and Character Education (BP). The application of Deep Learning and MMJ principles is particularly significant in the teaching of Islamic Religious Education (PAI) and Character Education (BP). These subjects aim not only to transmit doctrinal knowledge but also to internalize values, shape moral behavior, and cultivate spiritual awareness. However, previous research indicates that PAI instruction has often relied on textual explanation and memorization-based methods, limiting students' ability to internalize religious values meaningfully⁷.

⁴ Elvy Gustina, "Konsep Deep Learning dalam Pembelajaran Pendidikan Islam," *IKHTISAR: Jurnal Pengetahuan Islam* 5, no. 1 (2025): 79–90.

⁵ R Hafizah, "Implementing Deep Learning: The Role of 6Cs in the Merdeka Curriculum," *International Journal of Education Innovation* 9, no. 3 (2023): 88–95; M. Fullan, *Deep Learning: Engage the World Change the World* (Corwin Press, 2018).

⁶ Kemendikbudristek, "Implementing Deep Learning in the Merdeka Curriculum: Strategic Policies for Education Transformation," *Journal of Education Policy* 33, no. 4 (2025): 98–105.

⁷ Nur'itam, "Peran Guru dalam Penerapan Kurikulum Merdeka: Studi Kasus di Sekolah Dasar," *PENDIKDAS: Jurnal Pendidikan Sekolah Dasar* 06, no. 01 (2025): 2020–23.

Through Meaningful Learning, Islamic teachings can be contextualized within students' social realities, enabling them to interpret values such as honesty, responsibility, and tolerance as practical life principles rather than abstract norms⁸. Mindful Learning further strengthens spiritual awareness by encouraging students to reflect on the ethical implications of their actions. This approach is particularly relevant in the digital era, where exposure to diverse information requires moral discernment and religious moderation⁹.

Meanwhile, Joyful Learning fosters a participatory and dialogical classroom atmosphere, reducing the perception of PAI as rigid or dogmatic. Studies show that a positive learning environment enhances student motivation, openness, and engagement in discussing moral and religious issues¹⁰. Therefore, integrating MMJ into PAI and BP holds strong potential to transform these subjects into dynamic and reflective learning spaces.

Recent studies have explored the implementation of the Merdeka Curriculum across various disciplines, reporting improvements in student autonomy and engagement¹¹. Other research has examined the impact of deep learning strategies on critical thinking and collaborative skills development¹². In Islamic education contexts, several scholars have highlighted the importance of contextual and reflective pedagogies in strengthening value internalization¹³.

However, despite this growing body of literature, several limitations remain. First, many studies focus on policy analysis rather than empirical classroom implementation. Second, research examining Deep Learning often treats it as a general pedagogical concept without specifically analyzing its operationalization through Meaningful, Mindful, and Joyful Learning. Third, studies integrating MMJ principles into PAI and BP subjects remain limited, particularly in schools facing socio-economic and infrastructural challenges.

Most importantly, comparative analyses at the school level—especially in geographically and socially diverse contexts—are still scarce. There is limited empirical

⁸ Y Noviani dan S. Yanuarti, "Character Education in the Context of Merdeka Curriculum: Islamic Values and Social Realities," *Journal of Character Education* 10, no. 1 (2023): 77–84.

⁹ Jumah Purnomo dan Ilham Nursyiwani, "Urgensi Kurikulum Merdeka dalam Moderasi Beragama Mahasiswa di," *Jurnal Pendidikan Islam* 14, no. 1 (2024): 22–30, <https://doi.org/10.38073/jpi.v14i1.1497>.

¹⁰ I Nababan, "Creating a Positive Learning Environment for PAI in the Merdeka Curriculum," *Journal of Educational Environments* 27, no. 2 (2025): 134–45.

¹¹ F Andayanie, P Widyastuti, dan L Sari, "Challenges in Implementing Merdeka Curriculum at SMPN : An Empirical Study," *Journal of Educational Implementation* 12, no. 3 (2025): 78–85; Widyastuti Widyastuti et al., "Implementasi Prinsip Pengelolaan Meaningful, Mindful, dan Joyful Learning dalam Proses Pembelajaran Mendalam: Studi Kasus di Sekolah Dasar Islam Terpadu," *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 2025.

¹² R Azima, W Santoso, dan S. Pratama, "A Comparative Study of Merdeka Curriculum Implementation in Different Geographical Areas: Case Studies in Pasaman Barat, West Sumatra," *Indonesian Journal of Educational Research* 41, no. 3 (2023): 150–62; A Feriyanto, "Challenges in Implementing Merdeka Curriculum: A Study on the Differences in Educational Infrastructure.," *Journal of Educational Development* 22, no. 1 (2024): 40–55.

¹³ Feriyanto, "Deep Learning Approach Through Meaningful, Mindful, and Joyful Learning: A Library Research," *Electronic Journal Of Education, Social Economics and Technology* 5, no. 2 (2024): 208–12, <https://doi.org/10.47772/ijriss.2025.90400502>.

evidence explaining how contextual factors such as teacher readiness, facility constraints, and socio-economic diversity influence the effectiveness of Deep Learning within the Merdeka Curriculum framework.

This gap underscores the necessity of conducting an in-depth, context-based study that evaluates not only policy alignment but also pedagogical effectiveness in real educational settings.

SMPN Sungai Beremas represents a relevant case study for examining this issue. Located in a coastal region with unique social and geographical characteristics, the school reflects socio-economic diversity among students. Variations in access to resources, parental educational background, and technological infrastructure present challenges for implementing innovative pedagogies¹⁴.

At the same time, such contextual diversity provides an opportunity to assess whether Deep Learning principles can adapt to and thrive within constrained educational environments. Understanding how MMJ principles operate in this setting contributes valuable insights into the scalability and sustainability of curriculum reform.

Based on the discussion above, the central research problem of this study is the limited empirical understanding of the comparative effectiveness of the Merdeka Curriculum integrated with a Deep Learning approach (Meaningful, Mindful, Joyful Learning) in enhancing the quality of PAI and BP education at SMPN Sungai Beremas.

The objectives of this study are:

1. To analyze the implementation of the Merdeka Curriculum in PAI and BP at SMPN Sungai Beremas.
2. To evaluate the impact of Meaningful, Mindful, and Joyful Learning on student engagement and character development.
3. To examine how this pedagogical approach contributes to supporting SDG 4 and improving educational quality within the Indonesian context.

Unit of Analysis

The unit of analysis in this research is SMPN Sungai Beremas, a school that has adopted the Merdeka Curriculum and is situated in a coastal area characterized by socio-economic diversity among its students.

B. METHOD

This research was conducted at two public secondary schools located in Sungai Beremas District, Pasaman Barat Regency, West Sumatra, namely SMPN 1 and SMPN 2. These schools were purposively selected due to their contrasting conditions in terms of educational infrastructure and implementation of the Merdeka Curriculum¹⁵. SMPN 1, located in the central area, possesses relatively adequate facilities, including digital learning infrastructure. In contrast, SMPN 2, situated in the coastal area, faces limitations in access to educational resources and infrastructure. These contrasting

¹⁴ Azima, Santoso, dan Pratama, "A Comparative Study of Merdeka Curriculum Implementation in Different Geographical Areas: Case Studies in Pasaman Barat, West Sumatra."

¹⁵ Azima, Santoso, dan Pratama, "The State of Indonesian Education: A PISA-based Analysis on Literacy and Numeracy"; Feriyanto, "Deep Learning Approach Through Meaningful, Mindful, and Joyful Learning: A Library Research."

characteristics provide a meaningful comparative context for examining how the Deep Learning approach (Meaningful, Mindful, Joyful Learning) operates under different socio-geographical conditions¹⁶.

The selection of these research sites was based on social and geographical considerations that allow for a contextual analysis of curriculum implementation in schools with diverse challenges¹⁷. By comparing these two schools, the study seeks to identify whether infrastructural advantages significantly influence the effectiveness of Deep Learning or whether pedagogical practices play a more decisive role.

This study employed a Mixed Methods approach, combining quantitative and qualitative research designs. The use of mixed methods was chosen to provide a more comprehensive understanding of the research problem¹⁸. Quantitative data were used to measure differences in learning outcomes and student engagement between the two schools, while qualitative data were collected to explore contextual factors, instructional practices, and perceptions of teachers and school leaders.

The rationale for using mixed methods lies in its complementarity function. Quantitative analysis alone would identify statistical differences but would not explain the underlying pedagogical and contextual factors influencing those differences. Conversely, qualitative data alone would provide rich descriptions but lack measurable comparison. Therefore, integrating both approaches enhances the validity, depth, and explanatory power of the findings¹⁹. This design follows the convergent parallel mixed-method model, where quantitative and qualitative data were collected simultaneously, analyzed separately, and then integrated during interpretation.

The participants consisted of two primary groups: Islamic Religious Education (PAI) teachers and eighth-grade students from SMPN 1 and SMPN 2 Sungai Beremas. A total of 245 students participated in the quantitative survey, selected through proportional sampling to ensure representation from both schools²⁰. In addition, key informants included school principals and PAI teachers, who were selected purposively based on their direct involvement in implementing the Merdeka Curriculum.

The study was conducted from January to June 2026. Quantitative data were collected through structured questionnaires designed to measure students' perceptions of Meaningful, Mindful, and Joyful Learning practices, as well as their engagement in PAI classes. The instrument used a Likert scale and was tested for validity and reliability before distribution.

Qualitative data were obtained through semi-structured, in-depth interviews with principals and PAI teachers. These interviews explored instructional strategies, challenges in curriculum implementation, teacher creativity, and the influence of digital infrastructure on learning processes. Additionally, direct classroom observations were

¹⁶ Azima, Santoso, dan Pratama, "The State of Indonesian Education: A PISA-based Analysis on Literacy and Numeracy."

¹⁷ Azima, Santoso, dan Pratama; Zuariah, Hasanah, dan Naufal, "Shallow Learning in Indonesian Schools: A Critical Review of PISA Results."

¹⁸ Muhajjalina, "Implementing Merdeka Curriculum in Indonesian Secondary Schools: A Focus on Islamic Education."

¹⁹ Elvy Gustina, "Konsep Deep Learning dalam Pembelajaran Pendidikan Islam."

²⁰ Hafizah, "Implementing Deep Learning: The Role of 6Cs in the Merdeka Curriculum."

conducted to document teaching practices, student participation, and classroom atmosphere. Field notes were used to enrich and triangulate the interview data²¹.

Quantitative data were analyzed using descriptive and inferential statistics. Descriptive statistics were used to summarize mean scores and standard deviations of student responses. To determine whether there were statistically significant differences between SMPN 1 and SMPN 2, the Mann-Whitney U test was employed. This non-parametric test was selected because the data did not fully meet the normality assumption required for parametric testing²². The significance level was set at 0.05.

The Mann-Whitney U test allowed the researcher to determine whether differences in student engagement and Deep Learning implementation between the two schools were statistically meaningful. This analysis provided empirical evidence of comparative effectiveness.

Qualitative data were analyzed using thematic analysis. The process followed several systematic stages:

1. **Data Familiarization** – Transcribing interviews and reviewing field notes repeatedly to gain a holistic understanding of the data.
2. **Open Coding** – Identifying significant statements and assigning initial codes related to MMJ implementation, infrastructure use, teacher strategies, and challenges.
3. **Axial Coding** – Grouping similar codes into broader categories, such as “digital infrastructure utilization,” “contextual pedagogy,” “time constraints,” and “teacher creativity.”
4. **Theme Development** – Synthesizing categories into overarching themes that explain supporting and inhibiting factors in curriculum implementation.
5. **Triangulation** – Comparing interview findings with observation data and quantitative results to ensure credibility and consistency²³.

This rigorous coding process ensured transparency and dependability in qualitative interpretation. Themes derived from qualitative analysis were then integrated with quantitative findings to provide a comprehensive explanation of the results.

The focus of this research is the implementation of the Merdeka Curriculum integrated with the Deep Learning approach, specifically through the pillars of Meaningful, Mindful, and Joyful Learning (MMJ)²⁴. The study aims to identify both supporting and inhibiting factors influencing the effectiveness of curriculum implementation in PAI and BP.

By comparing two schools with different infrastructural capacities, this research seeks to determine whether Deep Learning effectiveness is primarily influenced by physical facilities or by pedagogical quality and teacher adaptability. The findings are expected to provide empirical insights into the effectiveness of Deep Learning-based

²¹ Kemendikbudristek, “Implementing Deep Learning in the Merdeka Curriculum: Strategic Policies for Education Transformation.”

²² Nur’itam, “Peran Guru dalam Penerapan Kurikulum Merdeka: Studi Kasus di Sekolah Dasar.”

²³ Noviani dan Yanuarti, “Character Education in the Context of Merdeka Curriculum: Islamic Values and Social Realities.”

²⁴ A Abdussyukur, “The Role of Moral Resilience in PAI Education: A Path to Religious Moderation,” *Journal of Educational and Moral Development* 30, no. 3 (2025): 99–108.

PAI instruction and the role of digital infrastructure in supporting meaningful learning experiences.

Furthermore, this study contributes to the development of adaptive educational policies that consider geographical and socio-economic diversity, in line with national education reform and curriculum transformation principles²⁵.

C. RESULTS AND DISCUSSION

1. Findings

1.1 Conceptual and Policy Context of Kurikulum Merdeka and Deep Learning

Based on Law No. 20 of 2003 concerning the National Education System, curriculum is defined as a set of plans and arrangements concerning objectives, content, teaching materials, and methods that guide learning activities to achieve educational goals. This definition positions the curriculum not merely as content, but as a managerial and operational instrument for educational units.

Classical curriculum scholars such as Ralph Tyler (1957) and Hilda Taba (1962) also define curriculum as a structured plan consisting of educational objectives and organized learning materials designed to achieve those objectives ²⁶. In the post-pandemic learning crisis, Kurikulum Merdeka was launched emphasizing flexibility, essential competencies (especially literacy and numeracy), and character development through the Project for Strengthening the Pancasila Student Profile (P5). This policy direction reflects a shift from “coverage-oriented instruction” to “mastery-oriented instruction,” where depth and meaning become central learning targets.

In PAI, this shift is particularly strategic because the goal of instruction is not only cognitive mastery but also the internalization of religious values into real behavior—moving beyond textual memorization. Theoretically, this aligns with Ki Hadjar Dewantara’s philosophy of “liberating education,” which emphasizes that teaching must be adapted to learners’ nature and socio-historical context to develop their potential optimally²⁷.

Within the Indonesian policy framework, particularly the refinement in Ministerial Regulation No. 13 of 2025, deep learning is defined as an approach that honors students by creating learning that is mindful, meaningful, and joyful through holistic integration of thinking, heart, emotion, and physical activity. This approach is built on major pillars: (1) Graduate Profile Framework, (2) Learning Principles, (3) Learning Experience, and (4) Learning Implementation Framework.



²⁵ Sugiyono, *Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&D dan Penelitian Pendidikan)* (Bandung: Alfabeta, 2023).

²⁶ Saim Akman, “Curriculum Development Approaches Around the World In S.A. Kiray & O. Cardak (Eds.),” in *Current Studies in Social Sciences*, vol. 127 (ISRES Publishing, 2024), 127–45.

²⁷ Dewi Fajaryati et al., “Ki Hajar Dewantara’s Philosophy Of Holistic Education Concept : Education For Independent Learning,” *INNOVATIVE: Journal Of Social Science Research* 3, no. 6 (2023): 2092–2101.

Figure 1. Framework of Deep Learning by Kemendikdasmen

The focus is directed toward achieving eight dimensions of the graduate profile: (1) faith and devotion to God Almighty, (2) citizenship, (3) critical thinking, (4) creativity, (5) collaboration, (6) independence, (7) health, and (8) communication. These dimensions represent competencies expected from students after completing the educational process¹. Compared to Michael Fullan's deep learning, the Indonesian formulation strengthens the spiritual dimension (faith and devotion) and adds health as an explicit outcome, suggesting a contextual adaptation of deep learning to national priorities.

1.2 Deep Learning (MMJ) Pillars in PAI Instruction

This study used the MMJ pillars—Meaningful, Mindful, and Joyful Learning—as the analytical lens for examining Deep Learning in PAI and BP.

Pillar I: Meaningful Learning. Meaningful learning, rooted in Ausubel's cognitive theory, occurs when new knowledge is connected substantively with learners' prior cognitive structures rather than memorized in isolation²⁸. For example, instead of teaching prayer only as procedural steps, teachers connected prayer to spiritual meaning and social ethics. Students were encouraged to reflect on value application (e.g., honesty and responsibility) in daily interactions.

Pillar II: Mindful Learning. Mindful learning draws on mindfulness theory (Kabat-Zinn) and emphasizes presence, awareness, and openness to new information—contrasting with “mindlessness,” where learners operate only on habit²⁹. In PAI, this appeared through tadabbur-based activities that invited students to read verses and reflect on their meaning and relevance to behavior.

Pillar III: Joyful Learning. Joyful learning emphasizes an enjoyable and psychologically safe environment that supports emotional engagement and retention. Social Learning Theory (Bandura) supports the view that learning is strengthened through interaction, modeling, and supportive environments³⁰. In practice, teachers used role-play, simulation, discussion, and game-based learning to increase participation and reduce perceptions of PAI as rigid.

This MMJ-based Deep Learning approach is strengthened by Islamic foundations emphasizing lifelong learning. The Qur'anic basis (Q.S Al-'Alaq 1-5) highlights the primacy of reading and learning³¹.

The foundations of Islamic Religious Education are widely mentioned in the Qur'an and Hadith, including:

²⁸ Annisa Indah Damayanti dan Aditya Abimanyu, “The Application of David Ausubel's Theory of Meaningful Learning in Enriching Students' conceptual understanding,” *Indonesian Journal of Educational Technology* 04, no. 01 (2025): 51-59, <https://doi.org/https://doi.org/10.26858/ijet.v4i1.8044> Indonesian.

²⁹ Cristina Pennarola, “The Mindfulness Framework in Higher Education and What Academics (Should) Care for.,” *mediAxiom* 42 (2024): 97-117.

³⁰ Norheni Aulia dan Surawan, “Joyful Learning as a Method in Improving Students' Self-Efficacy in the Learning Process of Islamic Education at SMPN 2 Palangka Raya,” *Indonesian Journal of Islamic Education and Learning* 1, no. 1 (2025): 9-21.

³¹ Nanik Setyawati et al., “Islamic Educational Perspective on Qur'anic Verses Surah Al-'Alaq 1-5 and Their Relevance to Artificial Intelligence Challenges,” *At-Ta'dib: Jurnal Ilmiah Prodi Pendidikan Agama Islam* 17, no. 2 (2025): 157-70, <https://doi.org/https://doi.org/10.47498/tadib.v17i2.5969>.

Q.S Al-'Alaq verses 1-5:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ
اقْرَأْ وَرَبُّكَ الْأَكْرَمُ الَّذِي عَلَّمَ بِالْقَلَمِ عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

Translation: "Read in the name of your Lord who created. He created man from a clot. Read, and your Lord is the Most Generous, who taught by the pen, taught man that which he knew not".

The essence of education is to keep learning. Reading is one of the keys to increasing knowledge, insight, and expertise. For Muslims, learning begins from birth and continues until death. Especially, Islamic Religious Education, which is the foundational base for every Muslim, must be solid and strong.

Hadith Nabi saw

عن عبدالله بن عمرو بن العاص رضي الله عنهما: أن النبي صلى الله عليه وسلم قال بل'غوا عني ولو آية، وحد'ثوا عن بني إسرائيل ولا حرج، ومن كذب علي متع'مداً فليتبوأ مقعده من النار. رواه البخاري

From Abdullah ibn Amr ibn Ash R.A., that the Prophet Muhammad S.A.W. said, "Convey from me even if it is just one verse, and narrate from Bani Israil without any issue, and whoever deliberately lies about me, let him prepare his seat in the Fire" (HR Bukhari).

It can be concluded that Islam highly values education, especially in the teachings of Islam. Islamic religious education should also be taught, particularly to students in schools, so that they can become religious individuals and good followers of their faith.

2. Description of Research Location and Subjects

This research was conducted in Sungai Beremas District (Nagari Air Bangis), a coastal region with a socio-economic pattern shaped by fishing activities on the coast and oil palm plantation work inland. These socio-geographical conditions influence student input profiles and school infrastructure availability.

SMPN 1 Sungai Beremas is the oldest and functions as the educational barometer of the district. Located in the town center, it has strong access to information networks and digital infrastructure. It is well-equipped with functional computer laboratories, an adequate library, and a well-organized learning environment, corresponding with its "A" accreditation status.

In contrast, SMPN 2 is located in a more remote plantation area, where most students come from farming families and employees of PT BNC and PT BTN. It faces limited technology access and frequent internet disruption (blank spots), creating a digital divide. However, these limitations also encouraged a distinct adaptation strategy among PAI teachers, producing pedagogical resilience through contextualization and interpersonal engagement.

A total of 245 eighth-grade students participated (having experienced Kurikulum Merdeka for at least one year), and qualitative informants included principals and PAI teachers. The objective comparison of conditions is presented in Table 2.

Table 2: Comparison of School Facilities and Infrastructure Conditions

No	Facilities and Infrastructure Indicators	SMPN 1 Sungai Beremas	SMPN 2 Sungai Beremas
1	Institution Accreditation	A (Very good)	B (good)
2	Computer Laboratory	Room (Capacity: 25 Units) 10 Projectors	1 Room equipped with 15 Chromebooks
3	Internet Network Stability	Stable (Fiber Optic)	Unstable (Frequent Disconnections)
4	Availability of Projectors in Classrooms	47,62% class room	16,67% classroom
5	Dominant Economic Background	Civil Servants Fishermen Oil Palm Farmers	Farmers Oil Palm Laborers PT BTN Employees
6	School Continuation Rate	High	Moderate

The table shows clear infrastructural disparity: SMPN 1 enjoys stable digital infrastructure enabling broader digital media exploration, while SMPN 2 experiences constrained digital access, limiting the feasibility of technology-based teaching.

3. Quantitative Results

3.1 Descriptive Statistics

Table 3 Descriptive Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
SMPN_1	186	12	57	44.53	7.267
SMPN_2	59	36	55	47.03	3.810
Valid N (listwise)	59				

Descriptive analysis shows that SMPN 1 had 186 respondents with scores ranging from 12 to 57. The mean score of Deep Learning implementation was 44.53 with a standard deviation of 7.267. This indicates wider variation in student perceptions, plausibly reflecting the diversity of digital media use, classroom practices, and student exposure enabled by strong infrastructure.

SMPN 2 had 59 respondents with a score range of 36 to 55. The mean score was higher at 47.03 with a smaller standard deviation of 3.810, indicating more homogeneous perceptions across students. The higher and more consistent score suggests that, despite limited technology, instructional experiences at SMPN 2 were perceived as more uniformly “deep” by students.

3.2 Mann–Whitney U Test

Test Statistics^a

	Hasil
Mann-Whitney U	4336.500
Wilcoxon W	21727.500
Z	-2.430
Asymp. Sig. (2-tailed)	.015

a. Grouping Variable: Kelas

The Mann–Whitney U test results produced $Z = -2.430$ with Asymp. Sig. (2-tailed) = 0.015. Since $0.015 < 0.05$, H_a is accepted, confirming a statistically significant difference in Deep Learning-based PAI effectiveness between SMPN 1 and SMPN 2. This indicates that differences in school ecosystems (infrastructure, teacher strategies, and learning culture) have measurable effects on student outcomes.

4. Qualitative Results

Qualitative analysis was conducted to explain the quantitative finding that SMPN 2 scored higher despite weaker infrastructure. Analysis followed an interactive cycle (data reduction, display, verification). In the reduction phase, interview and observation data were coded around how MMJ pillars were operationalized under each school's constraints.

Two dominant themes emerged:

1. **Digital infrastructure as an enabler (SMPN 1):** Teachers used projectors, interactive media, and digital resources to enrich Joyful Learning and support visualization in PAI topics. Students reported higher variety of learning activities, but the wider score dispersion suggests that not all classes experienced the same depth consistently—possibly due to differences in teacher digital mastery or classroom management patterns.
2. **Pedagogical resilience through contextualization (SMPN 2):** Teachers compensated for limited technology by strengthening Meaningful and Mindful Learning through personal engagement, reflective routines, and locally grounded examples (kearifan lokal). This created consistent student experiences, reflected in the lower standard deviation.

Discussion

This discussion interprets the findings through the lens of Deep Learning theory and MMJ, and explains why teacher creativity and instructional interaction appear more decisive than infrastructure alone.

First, the quantitative results show SMPN 2 achieving a higher mean (47.03) and more homogeneous perceptions (SD 3.810), while SMPN 1 shows more varied perceptions (SD 7.267). This pattern suggests that infrastructure does not automatically translate into consistently deep learning. Rather, it functions as a *potential resource* whose impact depends on how teachers mobilize it.

1) Stronger linkage to Deep Learning Theory (Fullan and 6Cs)

Michael Fullan's deep learning emphasizes the development of competencies through meaningful tasks, collaboration, communication, and real-world relevance. In this study, SMPN 2's contextual strategy is strongly aligned with Fullan's logic: learning becomes deep when students connect religious values to lived realities, engage in dialogue, and build character through authentic relevance³². Even without digital tools, SMPN 2 teachers created learning experiences that supported character and citizenship (values internalization), communication (discussion), collaboration (group work), and critical thinking (reflection on ethical dilemmas). This may explain both the higher mean and the consistency across students.

Meanwhile, SMPN 1's stronger digital infrastructure enhanced Joyful Learning through media use and modern classroom experiences, yet the higher variation suggests uneven teacher capacity in translating technology into deep learning tasks. In other words, technology may increase *instructional variety* but does not guarantee *depth* unless paired with intentional pedagogy.

2) Why Meaningful Learning appears decisive at SMPN 2 (Ausubel)

Ausubel's theory explains that meaningful learning occurs when new knowledge is integrated with existing cognitive structures. SMPN 2's contextual teaching—linking Islamic values to students' family socio-economic realities (e.g., plantation work ethics, responsibility, honesty)—creates high relevance, increasing emotional-cognitive engagement. This aligns with findings by Wardhono et al. indicating MMJ strategies strengthen sustainable deep learning through contextualization³³. The limitation of technology inadvertently “pushed” teachers toward contextualization, which may have strengthened Meaningful Learning more consistently than at SMPN 1.

3) Mindful Learning as reflective internalization and moral resilience

Both schools applied reflective routines (*muhasabah*), but in different forms. SMPN 1 sometimes used interactive media for reflection; SMPN 2 used available facilities such as *musholla* and teacher-led reflection dialogue. This supports the idea that Mindful Learning is less dependent on devices and more dependent on teacher facilitation and classroom culture. The finding aligns with Feriyanto, who notes mindful learning strengthens reflection and critical awareness³⁴. In PAI, this is crucial for moral resilience and religious moderation, particularly amid digital information overload.

4) Joyful Learning: technology helps, but psychological safety matters more

SMPN 1's Joyful Learning benefited from technology-based media, while SMPN 2 relied on relational approaches and relaxed but meaningful discussions. Bandura's Social Learning Theory helps explain that students learn through interaction, modeling, and reinforcement. Thus, teacher warmth, facilitation skills, and classroom psychological safety may generate “joy” even without technology—supporting the argument that the teacher's role as facilitator is central to Joyful Learning success.

5) Deeper analysis of inhibiting factors: time allocation and instructional trade-offs

The major inhibiting factor in both schools is limited lesson allocation time (3 hours per week). From a deep learning perspective, this constraint reduces

³² Fullan, *Deep Learning: Engage the World Change the World*.

³³ R Wardhono, S Santoso, dan A. Pratama, “The impact of contextualization in Deep Learning strategies in the classroom,” *International Journal of Learning* 32, no. 4 (2025): 210–25.

³⁴ Feriyanto, “Challenges in Implementing Merdeka Curriculum: A Study on the Differences in Educational Infrastructure.”

opportunities for extended inquiry cycles—especially exploration, elaboration, application, and reflection stages (Biggs, constructivist view). Programs such as tahfiz and Problem-Based Learning require time continuity for mastery and reflective consolidation. Therefore, time limitation creates an instructional trade-off: teachers must choose between covering planned competencies and implementing deeper learning processes fully.

Implications

The findings imply that curriculum transformation under Kurikulum Merdeka should not be evaluated only through facility readiness. Instead, policy implementation should prioritize:

1. Strengthening teacher pedagogical capacity in designing deep learning experiences;
2. Supporting contextual and local-wisdom-based learning models; and
3. Providing realistic time allocation or flexible scheduling for PAI programs (tahfiz, PBL) to ensure deep learning cycles can occur.

CONCLUSION

This study concludes that the implementation of the Merdeka Curriculum integrated with the Deep Learning approach (Meaningful, Mindful, Joyful Learning/MMJ) in Islamic Religious Education (PAI) at SMPN 1 and SMPN 2 Sungai Beremas demonstrates contextual variation in pedagogical practice. Although SMPN 1 benefits from stronger digital infrastructure, SMPN 2 achieved higher and more homogeneous effectiveness through contextualized and relational instructional strategies.

The significant difference between the two schools ($p = 0.015 < 0.05$) confirms that the effectiveness of Deep Learning is not primarily determined by infrastructure. Instead, teacher creativity, pedagogical resilience, and the quality of instructional interaction play a more decisive role. These findings contribute to the discourse on Islamic education reform by emphasizing contextual adaptation and teacher agency as key elements in curriculum transformation.

From a policy perspective, this study supports the objectives of SDG 4 in promoting inclusive and quality education. Strengthening teacher capacity and providing flexible instructional time are essential to optimizing the implementation of reflective and project-based learning in PAI.

Conflicts of Interest : The authors declare no conflict of interest

Author contributions: Widarti contributed to the study by validating the data and providing overall guidance for the research process. Naila Karima was responsible for data collection, data analysis, and drafting the manuscript. Both authors have read and approved the final version of the manuscript and take responsibility for its content.

Data availability : The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Disclaimer : The views expressed in this article are solely those of the authors and do not necessarily reflect the official position of Sungai Beremas Junior High School, its staff, or any affiliated institutions

Conclusion Drawing and Verification

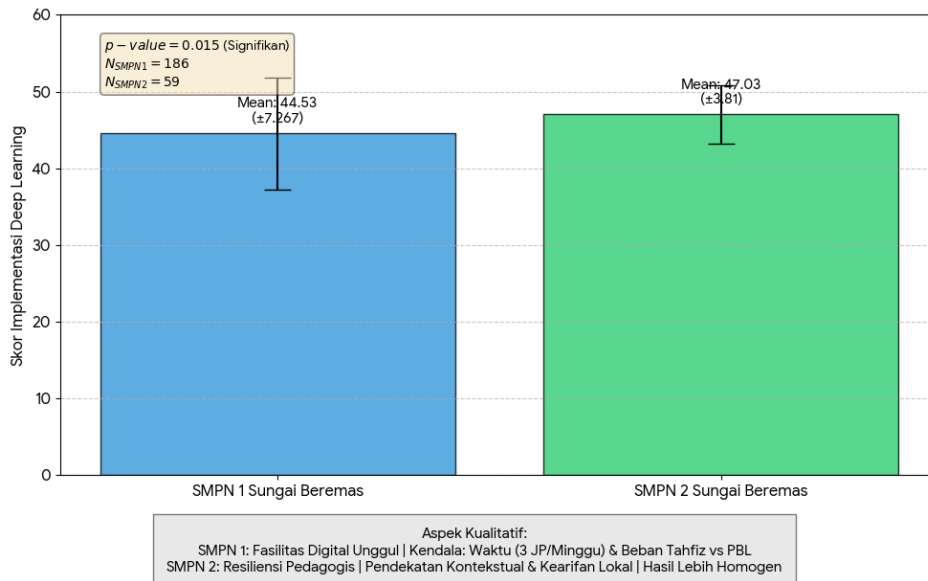


Figure 2. Comparison of the Implementation of the Merdeka Curriculum at SMP N 1 and SMP N 2 Sungai Beremas

Matriks Perbandingan Implementasi Kurikulum Merdeka (Deep Learning)

Aspek Perbandingan	SMPN 1 Sungai Beremas	SMPN 2 Sungai Beremas
Skor Rata-rata (Mean)	44.53	47.03 (Lebih Tinggi)
Homogenitas (SD)	7.267 (Bervariasi)	3.810 (Sangat Homogen)
Fasilitas	Akreditasi A, Lab Digital Lengkap	Terpencil, Kendala Internet (Blank Spot)
Pendekatan	Pemanfaatan Infrastruktur Modern	Resiliensi & Kearifan Lokal
Hambatan Utama	Alokasi Waktu (3 JP), Target Tahfiz	Keterbatasan Teknologi
Kesimpulan	Potensi Terhambat Sistemik	Efektivitas Interaksi Lebih Tinggi

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