

Transformation of Local Wisdom-Based Education: Synergy between Tradition, Technology, and the Merdeka Curriculum

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ABSTRAK

Transformasi pendidikan pada era digital menuntut pembelajaran yang tidak hanya adaptif terhadap perkembangan teknologi, tetapi juga tetap berakar pada nilai budaya lokal. Kearifan lokal memiliki potensi sebagai fondasi pedagogis dalam membangun pembelajaran yang kontekstual, bermakna, dan relevan dengan kehidupan peserta didik. Penelitian ini bertujuan untuk menganalisis transformasi pendidikan berbasis kearifan lokal melalui sinergi antara tradisi, teknologi, dan Kurikulum Merdeka. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi pustaka melalui telaah kritis terhadap artikel jurnal, buku, dokumen kebijakan, dan laporan pendidikan yang relevan dengan kearifan lokal, teknologi pendidikan, pendidikan karakter, dan implementasi Kurikulum Merdeka. Hasil penelitian menunjukkan bahwa kearifan lokal dapat berfungsi sebagai fondasi pembelajaran kontekstual, teknologi berperan sebagai media reinterpretasi budaya, dan Kurikulum Merdeka menyediakan ruang fleksibel bagi sekolah serta guru untuk mengembangkan pembelajaran berbasis budaya lokal. Kebaruan penelitian ini terletak pada pengembangan **Local Wisdom-Based Educational Transformation Framework**, yaitu kerangka konseptual yang mengintegrasikan nilai budaya, literasi digital, pembelajaran berbasis proyek, eksplorasi budaya, refleksi, kolaborasi komunitas, dan prinsip Kurikulum Merdeka. Penelitian ini berkontribusi pada pengembangan ilmu pendidikan dan inovasi pembelajaran berbasis budaya di era digital. Implikasinya, guru, sekolah, masyarakat, dan pembuat kebijakan perlu berkolaborasi dalam merancang pembelajaran digital yang tetap kontekstual, berkarakter, dan berakar pada identitas budaya lokal

Kata Kunci: Kearifan Lokal, Teknologi Pendidikan, Kurikulum Merdeka, Transformasi Pendidikan, Inovasi Pembelajaran

ABSTRACT

The Educational transformation in the digital era requires learning practices that are not only adaptive to technological development but also rooted in local cultural values. Local wisdom has strong potential as a pedagogical foundation for developing contextual, meaningful, and relevant learning experiences for students. This study aims to analyze local wisdom-based educational transformation through the synergy between tradition, technology, and the Merdeka Curriculum. This research employed a qualitative approach using library research by critically reviewing journal articles, books, policy documents, and educational reports related to local wisdom, educational technology, character education, and the implementation of the Merdeka Curriculum. The findings show that local wisdom functions as a foundation for contextual learning, technology serves as a medium for cultural reinterpretation, and the Merdeka Curriculum provides flexible space for schools and teachers to develop culturally grounded learning. The novelty of this study lies in the development of the **Local Wisdom-Based Educational Transformation Framework**, a conceptual framework that integrates cultural values, digital literacy, project-based learning, cultural exploration, reflection, community collaboration, and the principles of the Merdeka Curriculum. This study contributes to the development of educational science and culturally grounded learning innovation in the digital era. The implications suggest that teachers, schools, communities, and policymakers need to collaborate in designing digital learning practices that remain contextual, character-oriented, and rooted in local cultural identity.

Keywords: Local Wisdom, Educational Technology, Merdeka Curriculum, Educational Transformation, Learning Innovation.

INTRODUCTION

Education in the twenty-first century is increasingly required to respond to two major demands at the same time: preparing learners for global digital transformation and preserving the cultural values that shape their identity. International education discourse emphasizes that education should not only focus on cognitive achievement, but also build solidarity, justice, cultural diversity, and collective responsibility in facing future challenges (UNESCO, 2021). At the same time, technology has become an important part of educational transformation because it changes access to learning resources, classroom interaction, assessment models, and the way students construct knowledge (UNESCO, 2023). However, the use of technology in education needs to be guided by clear pedagogical, ethical, and cultural considerations so that digital transformation does not merely produce technical efficiency, but also meaningful learning experiences (Organisation for Economic Co-operation and Development, 2023). Therefore, educational transformation should be understood as a balanced process between innovation and cultural rootedness.

In Indonesia, the transformation of education is closely related to the implementation of the Merdeka Curriculum, which gives schools and teachers more flexibility to design learning according to students' needs, local contexts, and social realities. The Project for Strengthening the Profile of Pancasila Students provides a strategic space for contextual learning through themes such as local wisdom, diversity, entrepreneurship, sustainability, and social responsibility (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia, 2024). A systematic review by (Syahrir et al., 2024) shows that the Merdeka Curriculum has the potential to develop twenty-first-century skills, teacher autonomy, digital learning, and character formation based on Pancasila values. Similarly, (Hasan et al., 2024) explain that the Merdeka Curriculum can create a dynamic and inclusive learning environment, although its implementation still requires continuous support, teacher readiness, and adaptation to school conditions.

Local wisdom-based education is one of the most relevant approaches to strengthen the contextual character of the Merdeka Curriculum. Local wisdom refers to the values, knowledge, traditions, practices, arts, language, social norms, and cultural heritage that live within communities and can be used as meaningful learning resources. (Sadri & Temaja, 2025) state that local wisdom-based education can be implemented through curriculum integration, local content subjects, and extracurricular activities rooted in cultural practices. In line with this, (Annisha, 2024) argues that integrating local wisdom into the Merdeka Curriculum can create more inclusive, relevant, and meaningful learning experiences. Furthermore, (Parhan & Dwiputra, 2023) emphasize that local wisdom is not only cultural inheritance, but also a source of character education that can be actualized through the involvement of schools, families, and communities (Zulkarnain et al., 2024).

The integration of tradition into education does not mean returning to a static past, but reinterpreting cultural values so that they remain relevant to contemporary learning. For example, (Kusnadi, 2023) shows that Batik Pekalongan can be used as an innovative medium for character learning because it contains values of honesty, responsibility, cooperation, and creativity. Similarly, (Anang et al., 2023) demonstrate that the making of jumputan batik in elementary schools can strengthen the Pancasila

Student Profile through direct cultural practice. These studies indicate that tradition can become a living pedagogical resource when it is connected with active learning, project-based learning, and student reflection. Thus, local culture should not be treated merely as additional content, but as a foundation for designing learning that is contextual, participatory, and character-oriented.

The Merdeka Curriculum provides an important opportunity to connect local wisdom with character education and curriculum innovation. (Ratnawati et al., 2024) explain that the Pancasila Student Profile Strengthening Project can optimize character education when it is implemented through systematic planning, learning activities, and assessment. (Suwarni, 2024) also confirms that the Independent Curriculum can support character development through habituation, school culture, and the internalization of Pancasila values. More specifically, (Zainuddin, 2025) highlights that the synergy between the Merdeka Curriculum and local wisdom can strengthen student character through values such as gotong royong, musyawarah, and tolerance. This shows that curriculum transformation should not only focus on structural policy changes, but also on the ability of schools to translate cultural values into concrete learning practices (Halza et al., 2024).

At the same time, technology plays an increasingly important role in transforming local wisdom-based education. Digital technology can help teachers present cultural materials through interactive modules, digital storytelling, animation, mobile applications, videos, podcasts, virtual exhibitions, and project-based digital products. The (World Bank, 2025) emphasizes that digital pathways in education should enable greater learning impact, not simply expand access to technological devices. In the Indonesian context, (Pertiwi et al., 2025) propose the concept of Local Genius 6.0 as a model that connects local wisdom, digital transformation, and twenty-first-century curriculum. In addition, (Atmaja & Niam, 2025) show that local wisdom-based character education modules with interactive technology can increase the attractiveness, practicality, and effectiveness of learning. These findings indicate that technology can become a bridge between tradition and modern learning when it is designed with cultural relevance.

The use of technology in local wisdom-based learning must also be connected with digital literacy and ethical awareness. Digital learning environments expose students to global information, popular culture, social media, and algorithmic content that may influence their values, identity, and behavior. (Japar et al., 2024) argue that digital citizenship is essential in civic education because students need to understand their rights, responsibilities, and ethical behavior in virtual spaces. (Japar et al., 2023) further show that digital literacy-based multicultural education can strengthen students' respect for diversity through civic education. In Islamic education, (Muflihin, 2024) also emphasizes that local wisdom and digital literacy can be integrated to build students' inclusive, tolerant, and ethical character. Therefore, the synergy between tradition and technology requires not only digital skills, but also cultural sensitivity and moral responsibility (Zohri & Hilalludin, 2025).

Several recent studies have developed technology-based learning media that incorporate local wisdom, but the discussion is still often limited to specific products or limited classroom contexts. (Faustine, 2025) developed a mobile application based on East Java local wisdom to support character education, showing that digital

applications can introduce cultural values in an engaging and interactive way. (Kartini et al., 2025) argue that animation-based learning media with local wisdom can be used as a strategy for character education in the digital era. Meanwhile, (Paulina et al., 2025) found that local wisdom-based instructional materials can improve students' reading skills and engagement. These studies show the potential of local wisdom-based learning innovation, but they have not fully explained how tradition, technology, and the Merdeka Curriculum can be integrated into one comprehensive educational transformation model (Raharja & Hilalludin, 2025).

The existing literature reveals several important research gaps. First, many studies discuss local wisdom as a source of character education, but they do not always connect it explicitly with the curriculum transformation agenda under the Merdeka Curriculum. Second, research on digital learning often focuses on media effectiveness, digital literacy, or learning outcomes, while the cultural meaning of technology use receives less attention. Third, studies on the Merdeka Curriculum have discussed flexibility, project-based learning, and Pancasila values, but the relationship between tradition, technology, and local wisdom-based curriculum innovation still needs deeper conceptual elaboration. (Layli et al., 2023) emphasize that local wisdom-based character education is strategic in facing globalization and digital challenges, but teachers need to reconstruct learning processes according to cultural and technological changes. (Yusuf et al., 2024) also underline that collaboration among teachers, parents, and communities is needed to integrate local wisdom into character education. Therefore, a more integrative framework is needed to explain how local wisdom, educational technology, and the Merdeka Curriculum can work together.

Based on these gaps, this study offers novelty by positioning local wisdom-based educational transformation as a synergy between tradition, technology, and the Merdeka Curriculum. Unlike previous studies that tend to examine local wisdom, digital learning, or curriculum implementation separately, this study proposes an integrative perspective in which local cultural values become the ethical and contextual foundation, technology becomes the medium of innovation, and the Merdeka Curriculum becomes the policy and pedagogical space for implementation. The novelty of this study lies in three main aspects: first, it conceptualizes local wisdom not only as cultural content, but as a transformative pedagogical foundation; second, it frames technology not merely as a learning tool, but as a medium for cultural reinterpretation and student creativity; and third, it places the Merdeka Curriculum as a flexible curriculum structure that enables schools to design culturally grounded and digitally relevant learning. Therefore, this study is expected to contribute to the development of educational theory, curriculum innovation, and learning practices that are adaptive to global change while remaining rooted in Indonesian cultural identity.

METHODS

This study employed a qualitative research design using a library research approach. This method was chosen because the study focuses on analyzing and synthesizing theoretical concepts, previous research findings, policy documents, and international reports related to local wisdom-based education, educational technology, and the implementation of the Merdeka Curriculum. The data sources consisted of scholarly journal articles, books, official curriculum documents, and

relevant educational reports published within the last five years. The literature was selected purposively based on several criteria: relevance to the research topic, credibility of the source, recency of publication, and contribution to the discussion of tradition, technology, curriculum innovation, and character education. Through this approach, the study aimed to build a comprehensive understanding of how local wisdom can be integrated with digital technology and the Merdeka Curriculum to support contextual and transformative learning (Sugari et al., 2025).

The data analysis was conducted through content analysis by reviewing, classifying, interpreting, and synthesizing the selected literature. First, the collected sources were examined to identify key ideas related to local wisdom, cultural values, digital learning, project-based learning, and curriculum transformation. Second, the findings were grouped into several major themes, including local wisdom as a pedagogical foundation, technology as a medium of learning innovation, and the Merdeka Curriculum as a flexible framework for contextual education. Third, the themes were critically interpreted to identify research gaps and to formulate an integrative conceptual perspective. To maintain the trustworthiness of the study, source triangulation was applied by comparing findings from academic journals, government documents, and international reports. Therefore, this method enabled the researcher to formulate a systematic, credible, and contextual analysis of the synergy between tradition, technology, and the Merdeka Curriculum in transforming local wisdom-based education (Abdurrozak et al., 2025).

RESULT AND DISCUSSION

RESULT

The results of this study are derived from a synthesis of the reviewed literature on local wisdom-based education, educational technology, and the implementation of the Merdeka Curriculum. Since this study uses a library research approach, the findings are presented as conceptual and thematic patterns rather than statistical data. The analysis reveals five major findings: local wisdom functions as a contextual pedagogical foundation; technology serves as a medium for cultural reinterpretation; the Merdeka Curriculum provides flexible space for contextual learning; tradition, technology, and curriculum can be integrated into a transformative learning model; and local wisdom-based educational transformation requires a systematic conceptual framework.

Local Wisdom as a Contextual Pedagogical Foundation

The first finding shows that local wisdom functions as a contextual pedagogical foundation in transforming education. Local wisdom is not merely a cultural heritage inherited from the past, but a living source of educational values that can be integrated into learning activities. It includes traditions, oral stories, local arts, social norms, ecological practices, community rituals, language, and moral values that are closely connected to students' daily lives. This finding is in line with (Parhan & Dwiputra, 2023), who state that local wisdom can be actualized in character education through the involvement of schools, families, and communities.

The literature also indicates that learning becomes more meaningful when it is connected with students' cultural environment. Local wisdom-based learning enables students to understand knowledge not as an abstract concept, but as something related

to their social reality, identity, and community life. (Sadri & Temaja, 2025) explain that local wisdom-based education can be implemented through curriculum integration, local content subjects, and extracurricular activities. Similarly, (Annisha, 2024) argues that integrating local wisdom into the Merdeka Curriculum can create more inclusive and relevant learning experiences.

Forms of Local Wisdom	Educational Values	Learning Relevance
Traditional arts	Creativity, cultural appreciation, identity	Art-based and project-based learning
Local stories and folklore	Moral values, wisdom, empathy	Digital storytelling and literacy learning
Community traditions	Cooperation, responsibility, solidarity	Collaborative and contextual learning
Local language	Identity, communication, cultural pride	Contextual literacy and language learning
Environmental practices	Sustainability, care, responsibility	Ecological and science-based learning
Traditional deliberation	Dialogue, democracy, mutual respect	Civic education and character learning

Table 1. Forms of Local Wisdom and Their

Table 1 shows that local wisdom can be transformed into various educational values. Traditional arts, for example, can strengthen creativity and cultural identity, while local stories can support moral learning and literacy development. This finding confirms that local wisdom should not be positioned only as supplementary material, but as a foundation for designing contextual, reflective, and character-oriented learning.

Technology as a Medium for Cultural Reinterpretation

The second finding reveals that technology can function as a medium for cultural reinterpretation. In this context, technology should not be viewed as the opposite of tradition. Instead, it can be used to preserve, communicate, and reinterpret local wisdom in forms that are more relevant to digital-native students. Digital storytelling, animation, interactive modules, podcasts, virtual exhibitions, educational videos, and mobile applications can help teachers present cultural values in more engaging and accessible ways. (UNESCO World Water Assessment Programme, 2024) emphasizes that technology in education must be used with clear pedagogical direction so that it can support meaningful learning rather than merely provide digital tools.

Several studies support this finding. (Faustine, 2025) shows that mobile applications based on East Java local wisdom can support character education by introducing cultural values through digital media. (Kartini et al., 2025) also explain that animation-based learning media with local wisdom can become a strategy for character education in the digital era. These studies indicate that technology can

become a bridge between cultural heritage and modern learning innovation when it is designed with cultural relevance and educational purpose.

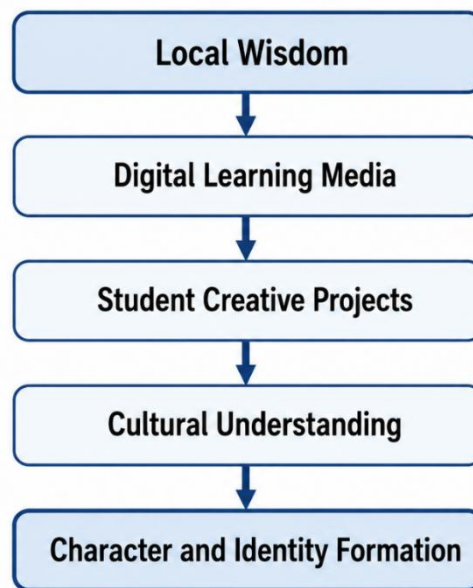


Figure 1. Digital Transformation of Local Wisdom

Figure 1 illustrates that local wisdom can be transformed into digital learning media and student creative projects. Through this process, students are not only introduced to cultural values, but also encouraged to reinterpret them creatively. For example, students can create short videos about local traditions, digital posters about cultural values, podcasts about local history, or interactive presentations about community practices. Therefore, technology can support cultural preservation and character formation when it is integrated with reflective learning activities.

The Merdeka Curriculum as a Flexible Space for Local Wisdom-Based Learning

The third finding shows that the Merdeka Curriculum provides flexible space for local wisdom-based educational transformation. The Merdeka Curriculum allows schools and teachers to design learning according to students' needs, local contexts, and social realities. This flexibility is important because Indonesia has diverse cultural, geographical, and social conditions. The Project for Strengthening the Profile of Pancasila Students also provides a strategic platform for implementing contextual learning through themes such as local wisdom, diversity, sustainability, entrepreneurship, and social responsibility (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia, 2024).

The reviewed literature indicates that the Merdeka Curriculum can support character development when implemented through contextual and project-based learning. (Syahrir et al., 2024) state that the Merdeka Curriculum has the potential to strengthen twenty-first-century skills, teacher autonomy, digital learning, and Pancasila-based character formation. (Ratnawati et al., 2024) also emphasize that the Pancasila Student Profile Strengthening Project can optimize character education when it is supported by systematic planning and meaningful learning activities. Thus, the Merdeka Curriculum can become a bridge between cultural values, technology, and curriculum innovation.

Box 1. Key Roles of the Merdeka Curriculum in Local Wisdom-Based Education

1.	Providing curricular flexibility for schools and teachers.
2.	Supporting contextual and project-based learning.
3.	Strengthening the Profile of Pancasila Students.
4.	Encouraging school-based curriculum innovation.
5.	Connecting local culture with twenty-first-century competencies.
6.	Creating space for collaboration between schools, families, and communities.

Box 1 summarizes the main roles of the Merdeka Curriculum in supporting local wisdom-based education. The curriculum does not only function as a formal policy document, but also as a pedagogical space that enables teachers to design learning based on local culture and student needs. Therefore, the success of local wisdom-based educational transformation depends on how teachers and schools translate curriculum flexibility into meaningful classroom practice.

Synergy between Tradition, Technology, and the Merdeka Curriculum

The fourth finding indicates that educational transformation based on local wisdom requires synergy between tradition, technology, and the Merdeka Curriculum. Tradition provides values, identity, and cultural meaning. Technology provides media, innovation, and wider access to learning. Meanwhile, the Merdeka Curriculum provides policy flexibility and pedagogical space for contextual learning. These three elements should not be separated because each element has a different but complementary role in educational transformation.

The synergy between tradition, technology, and curriculum can create learning that is culturally rooted, digitally relevant, and pedagogically meaningful. (Pertiwi et al., 2025) propose the concept of Local Genius 6.0 as a model that connects local wisdom and digital transformation in the twenty-first-century curriculum. In addition, (Zainuddin, 2025) highlights that the synergy between the Merdeka Curriculum and local wisdom can strengthen student character through values such as gotong royong, musyawarah, and tolerance. These findings support the idea that educational transformation should be carried out through an integrative approach rather than fragmented innovation. In other words, tradition, technology, and curriculum reform should not be developed separately, because each element has a complementary role in shaping meaningful learning. Tradition provides cultural values and identity, technology offers innovative media and wider learning access, while the Merdeka Curriculum creates flexible pedagogical space for contextual implementation. Therefore, educational innovation will be more effective when these three elements are connected in a coherent learning design that is culturally rooted,

digitally relevant, and aligned with students' real-life experiences (Hilalludin & Sugari, 2026).

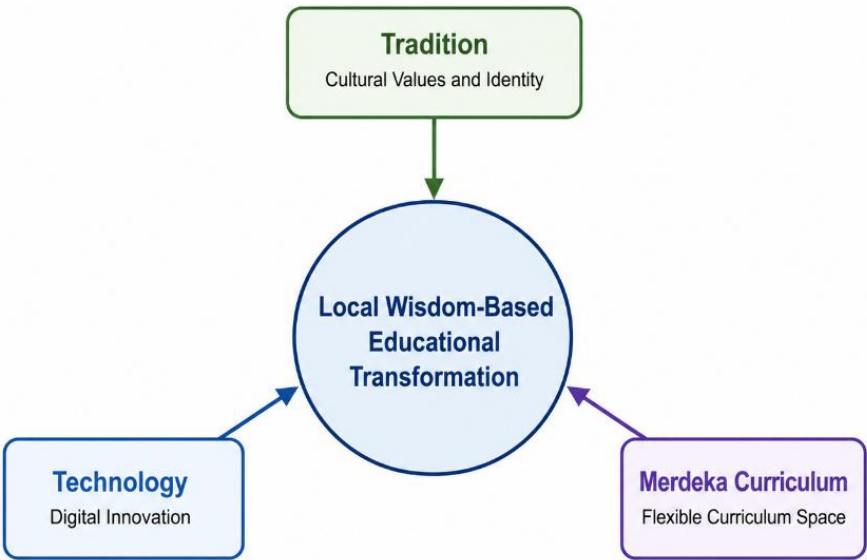


Figure 2. Triadic Synergy Model of Local

Figure 2 presents the triadic synergy model of local wisdom-based educational transformation. The model shows that tradition, technology, and the Merdeka Curriculum need to be integrated into one educational ecosystem. Tradition gives meaning, technology provides innovation, and the Merdeka Curriculum enables implementation. Through this synergy, local wisdom-based education can become more adaptive to digital transformation without losing its cultural foundation.

Proposed Framework: Local Wisdom-Based Educational Transformation Framework

The fifth finding is the formulation of a conceptual framework called the Local Wisdom-Based Educational Transformation Framework. This framework is proposed as the main novelty of this study because it integrates local wisdom, cultural values, digital literacy, and the principles of the Merdeka Curriculum into one systematic and interconnected model. Unlike previous studies that tend to discuss local wisdom, educational technology, and curriculum implementation as separate areas of inquiry, this study positions the three elements as mutually reinforcing components in transforming educational practices. Local wisdom provides the cultural and ethical foundation of learning, technology functions as a medium for innovation and cultural reinterpretation, while the Merdeka Curriculum offers flexible pedagogical space for contextual and project-based learning. Therefore, this framework emphasizes that educational transformation should not only focus on digital adaptation, but also on the preservation, reinterpretation, and internalization of local cultural values within modern learning environments (Hilalludin et al., 2025).

The proposed framework consists of four main components: input, process, output, and impact. The input includes local wisdom, cultural values, community traditions, digital literacy, and the principles of the Merdeka Curriculum. The process component includes contextual learning, project-based learning, digital media integration, cultural exploration, student reflection, and community collaboration, all of which function as interconnected strategies to transform local wisdom into meaningful learning experiences. Through this process, students are encouraged not only to understand cultural values cognitively, but also to experience, reinterpret, and apply them in real learning activities. The output includes character formation, cultural identity, creativity, digital competence, and social responsibility as essential learning outcomes that reflect the integration of tradition and innovation. Meanwhile, the expected impact is the formation of learners who are culturally rooted, digitally adaptive, creative, socially responsible, and capable of participating actively in modern educational environments without losing their local identity and moral foundation.

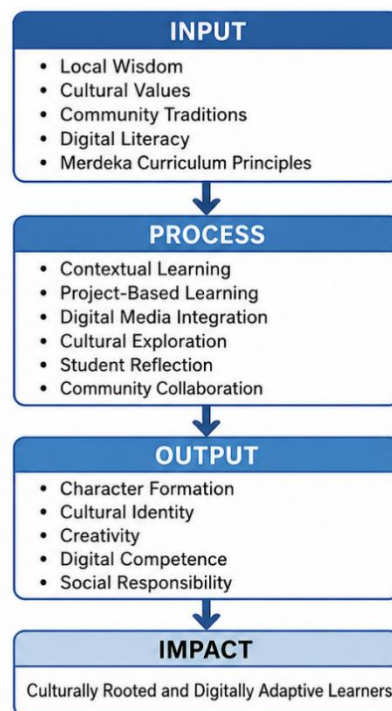


Figure 3. Local Wisdom-Based Educational

Figure 3 shows that local wisdom-based educational transformation is not only about inserting cultural content into learning materials. It requires a systematic process that connects cultural values, digital media, curriculum flexibility, student reflection, and community participation. This framework emphasizes that technology should not replace tradition, but should help reinterpret and communicate tradition in ways that are meaningful for students in the digital era.

DISCUSSION

Tradition and Technology Are Not Opposites

The findings of this study challenge the assumption that tradition and technology are two opposing elements in education. Tradition is often associated with the past, while technology is associated with the future. However, the results show that both can support each other when integrated through appropriate pedagogical design. Tradition provides cultural meaning and ethical values, while technology offers new forms of representation, communication, and learning innovation. This is consistent with (UNESCO, 2021), which emphasizes that education should build a new social contract rooted in solidarity, cultural diversity, and collective responsibility.

Technology can help local wisdom reach students in ways that are closer to their digital habits. For example, local stories can be transformed into digital storytelling projects, traditional arts can be presented through video-based learning, and community practices can be documented through student-created digital portfolios. However, technology must not be used only as decoration or visual attraction. Its use must be guided by cultural meaning, ethical awareness, and learning objectives. If technology is used without pedagogical direction, local wisdom may become superficial content rather than a source of character formation.

Local Wisdom-Based Learning as a Strategy for Meaningful Education

Local wisdom-based learning is important because it makes education more meaningful and contextual. Students learn not only from textbooks, but also from their social environment, cultural heritage, and community practices. This approach helps students understand the relationship between knowledge, values, and real life. (Kusnadi, 2023) shows that Batik Pekalongan can become an innovative medium for character learning because it contains values of honesty, responsibility, cooperation, and creativity. This indicates that cultural practices can be transformed into learning experiences that support both knowledge acquisition and character development.

Meaningful education requires students to be actively involved in constructing knowledge. Local wisdom-based learning allows students to observe, document, discuss, reflect, and create learning products based on cultural phenomena around them. In this way, students do not only memorize cultural facts, but also understand the values behind them. This is also relevant to (Yusuf et al., 2024), who emphasize that the integration of local wisdom in character education requires collaboration among teachers, parents, and communities. Therefore, local wisdom-based learning can strengthen the connection between school, family, and community.

The Merdeka Curriculum as a Bridge between Culture and Innovation

The Merdeka Curriculum plays an important role as a bridge between culture and innovation. Its flexibility allows teachers to design learning based on local contexts and student needs. This is particularly relevant for local wisdom-based education because each region has different cultural resources and social characteristics. Through the Merdeka Curriculum, teachers can develop projects that connect local culture with digital technology, character education, and twenty-first-century skills. (Hasan et al., 2024) explain that the implementation of the Merdeka Curriculum can create a dynamic and inclusive learning environment, although it still requires teacher readiness and institutional support.

The Project for Strengthening the Profile of Pancasila Students can become a strategic medium for integrating local wisdom into learning. Through project-based learning, students can explore local culture, identify community problems, produce digital works, and reflect on values such as cooperation, responsibility, diversity, and creativity. (Suwarni, 2024) confirms that the Independent Curriculum can support character development when schools implement it contextually. Thus, the Merdeka Curriculum should not be understood only as a policy change, but as an opportunity to transform learning into a more contextual, participatory, and culturally grounded process.

Challenges in Implementing Local Wisdom-Based Educational Transformation

Although local wisdom-based educational transformation has strong potential, its implementation faces several challenges. First, not all teachers are prepared to design learning that integrates local wisdom, technology, and curriculum objectives. Some teachers may understand local wisdom as cultural content, but not as a pedagogical foundation. Second, cultural integration in schools is sometimes symbolic, such as displaying traditional objects or holding cultural events, without deep reflection on values. Third, digital infrastructure gaps may limit the use of technology, especially in schools with limited access to devices, internet connection, or digital learning resources.

Another challenge is the limited involvement of communities in school-based learning. Local wisdom is rooted in community life, so schools need collaboration with parents, local leaders, artists, cultural practitioners, and community members. Without this collaboration, local wisdom-based learning may lose its authenticity. Furthermore, assessing character, cultural identity, and digital competence is more complex than assessing cognitive achievement. Teachers need alternative assessment strategies such as portfolios, reflection journals, project products, observation, and performance-based assessment.

Challenges	Strategic Responses
Limited teacher readiness	Training on local wisdom-based digital pedagogy
Superficial cultural integration	Reflective and project-based learning design
Digital infrastructure gaps	Flexible use of low-cost and accessible technology
Limited community involvement	School-community collaboration
Difficulty in assessing character	Portfolio, reflection, and performance-based assessment
Weak connection between curriculum and local culture	School-based curriculum mapping using local resources

Table 2. Challenges and Strategic Respon

Table 2 shows that the transformation of local wisdom-based education requires strategic responses. Teacher training, reflective learning design, accessible technology, community collaboration, and alternative assessment are important

elements to ensure that local wisdom is not only introduced, but also internalized in students' learning experiences.

Theoretical and Practical Implications

Theoretically, this study contributes to the development of local wisdom-based education by proposing an integrative perspective that connects tradition, technology, and the Merdeka Curriculum. The study expands the discussion of local wisdom by positioning it not only as cultural content, but as a transformative pedagogical foundation. It also contributes to the discourse on educational technology by showing that technology should be used to support cultural reinterpretation, student creativity, and character formation. In addition, the proposed framework provides a conceptual model that can be used by future researchers to examine local wisdom-based learning in different educational contexts (Hilalludin et al., 2025).

Practically, this study provides several implications for teachers, schools, policymakers, and future researchers. Teachers can use the framework to design digital learning activities based on local culture. Schools can develop Pancasila Student Profile projects that involve cultural exploration, digital media production, and community collaboration. Policymakers can strengthen curriculum policies by encouraging schools to integrate local wisdom into digital learning innovation. Future researchers can further test the proposed framework through field research, research and development, classroom action research, or mixed-method studies. Therefore, local wisdom-based educational transformation should be understood as a continuous process that requires cultural commitment, technological creativity, and curriculum innovation.

Overall, the findings and discussion confirm that the synergy between tradition, technology, and the Merdeka Curriculum is essential for transforming local wisdom-based education. Tradition provides values and identity, technology offers innovation and accessibility, while the Merdeka Curriculum provides flexibility and pedagogical space. When these three elements are integrated, education can become more contextual, meaningful, adaptive, and culturally rooted. Thus, local wisdom-based educational transformation is not only relevant for preserving cultural heritage, but also for preparing learners to face digital transformation without losing their identity and moral foundation.

CONCLUSION

This study concludes that local wisdom-based education has an important role in transforming learning into a more contextual, meaningful, and culturally rooted process. Local wisdom is not merely cultural heritage or supplementary material, but a pedagogical foundation that contains educational values such as cooperation, responsibility, tolerance, creativity, cultural identity, and social awareness. Through the integration of local traditions, community practices, local stories, traditional arts, language, and environmental values, students can understand learning as something closely related to their real life and cultural environment. Therefore, local wisdom-based education can strengthen character formation while maintaining students' connection with their social and cultural identity.

The findings also show that technology and tradition should not be positioned as opposing elements in education. Technology can function as a medium for cultural reinterpretation when it is used to present local wisdom through digital storytelling, animation, interactive learning modules, videos, podcasts, mobile applications, and student creative projects. At the same time, the Merdeka Curriculum provides flexible curricular space for teachers and schools to design contextual, project-based, and culturally relevant learning. The synergy between tradition, technology, and the Merdeka Curriculum enables education to become more adaptive to digital transformation without losing its cultural foundation.

The novelty of this study lies in the formulation of the Local Wisdom-Based Educational Transformation Framework, which integrates local wisdom, cultural values, digital literacy, and Merdeka Curriculum principles into a systematic model consisting of input, process, output, and impact. This framework contributes to educational theory by positioning local wisdom as a transformative pedagogical foundation, not only as cultural content. Practically, the study implies that teachers, schools, communities, and policymakers need to collaborate in designing digital learning innovations based on local culture. Future research may further examine this framework through field studies, research and development, classroom action research, or mixed-method approaches to test its effectiveness in various educational contexts.

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