

Review Article

21st Century Skills and Character Education: Building Indonesia's Future-Ready Generation

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Abstract: This systematic literature review examines the integration of 21st century skills and character education within Indonesia's educational framework, addressing the critical need for educational transformation to achieve the Golden Indonesia 2045 vision. The study analyzes the theoretical foundations, implementation challenges, and strategic approaches for developing future-ready competencies among Indonesian students through a comprehensive review of scholarly articles and policy documents from the Scopus database. The research methodology involved systematic collection and analysis of empirical studies, policy documents, and educational frameworks, with particular focus on the Merdeka Curriculum and Profil Pelajar Pancasila (Pancasila Student Profile) implementation. Key findings reveal that while Indonesia has established innovative policy frameworks integrating global competencies with local Pancasila values, significant implementation barriers persist, including infrastructure disparities, teacher preparedness challenges, and inadequate assessment systems. The study demonstrates that project-based learning approaches and local wisdom integration show promising results in developing critical thinking, collaboration, and character development. However, PISA 2022 results indicate substantial gaps in creative thinking capabilities, with only 31% of Indonesian students achieving baseline proficiency compared to 78% across OECD countries. The research concludes that successful integration requires sustained investment in teacher professional development, digital equity initiatives, and comprehensive evaluation frameworks that address both cognitive and character development dimensions. These findings provide essential insights for policymakers and educators working toward building Indonesia's future-ready generation equipped with both 21st century competencies and strong moral foundations.

Keywords: 21st Century Skills; Character Education; Indonesia Education System.

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1. Introduction

In an era of unprecedented digital transformation and global interconnectedness, the traditional paradigms of education are being fundamentally challenged. The convergence of technological advancement, economic globalization, and societal evolution has created an urgent need for educational systems worldwide to reimagine how they prepare students for an increasingly complex and dynamic future. This transformation is particularly critical for developing nations like Indonesia, which stands at a pivotal juncture in its quest to achieve the ambitious "Golden Indonesia 2045" vision [1].

The concept of 21st century skills has emerged as a cornerstone of modern educational reform, representing a comprehensive framework of competencies that extend far beyond traditional academic knowledge. These skills encompass critical thinking, creativity, communication, collaboration, digital literacy, and adaptability capabilities that are essential for success in contemporary work environments and civic participation. Research indicates that by

2030, there will be a dramatic increase in demand for higher cognitive skills, advanced literacy, critical thinking, and complex information processing, while simultaneously requiring individuals to demonstrate emotional intelligence, cultural competency, and innovative problem-solving abilities [2].

Parallel to the emphasis on 21st century skills, character education has gained renewed significance as educators and policymakers recognize that intellectual capabilities alone are insufficient for producing well-rounded, ethical, and responsible citizens [3]. Character education, defined as the deliberate effort to cultivate virtues such as integrity, empathy, resilience, and civic responsibility, serves as the moral foundation upon which technical competencies can be meaningfully applied [4]. This dual focus on skills development and character formation represents a holistic approach to education that acknowledges the complexity of human development and the multifaceted nature of contemporary challenges.

For Indonesia, the integration of 21st century skills and character education assumes particular importance within the context of its demographic dividend and national development aspirations. With a population where over 60% consists of productive-age individuals until 2041-2042 [5], Indonesia possesses an unprecedented opportunity to harness its human capital for sustainable development and economic growth. The government's Golden Indonesia 2045 vision explicitly recognizes that achieving the status of a developed nation requires not only economic transformation but also the cultivation of a "quality and productive generation" equipped with both the technical competencies and moral foundations necessary for national progress.

The Indonesian educational landscape has witnessed significant policy developments in this regard, most notably through the implementation of the Pancasila Student Profile (Profil Pelajar Pancasila) and the Strengthening Character Education (Penguatan Pendidikan Karakter/PPK) program [6]. These initiatives represent the government's commitment to integrating character development with skills acquisition, creating an educational framework that emphasizes six key dimensions: faith and devotion to God Almighty, global diversity, cooperation, independence, critical reasoning, and creativity [7]. This approach reflects a uniquely Indonesian synthesis of universal 21st century competencies with culturally grounded values derived from the nation's philosophical foundation, Pancasila.

The urgency of this educational transformation is underscored by empirical evidence from multiple sources within, which reveals both promising developments and significant challenges in the implementation of 21st century skills and character education programs [8]. Systematic literature reviews indicate that while research on 21st century skills has grown exponentially over the past two decades [9], substantial gaps remain in understanding the determinants of communication and collaboration skills, particularly in digital contexts [8]. Similarly, character education research, while demonstrating positive effects on student outcomes, reveals the need for more comprehensive approaches that integrate cognitive, affective, and behavioral dimensions of development.

The intersection of 21st century skills and character education presents both opportunities and challenges for Indonesia's educational system. On one hand, the integration of these approaches offers the potential to create a generation of citizens who are not only technically proficient but also ethically grounded and culturally aware [10]. On the other hand, the implementation of such comprehensive educational reforms requires significant investments in teacher preparation, curriculum development, assessment systems, and institutional capacity building [11].

Contemporary research emphasizes that successful integration of 21st century skills and character education requires a systematic approach that addresses multiple dimensions of educational practice. This includes the development of pedagogical frameworks that promote active learning, critical inquiry, and collaborative problem-solving, while simultaneously fostering moral reasoning, empathy, and social responsibility [12]. The challenge for Indonesia lies in adapting these global best practices to local contexts while maintaining the cultural authenticity and national identity that characterize Indonesian education.

The digital transformation of education, accelerated by the COVID-19 pandemic, has further highlighted the importance of 21st century skills while simultaneously creating new challenges for character development [13]. As educational delivery increasingly relies on digital platforms and virtual interactions, educators must find innovative ways to cultivate not only technical competencies but also the interpersonal skills, emotional intelligence, and ethical reasoning that form the foundation of character. This digital imperative requires a

fundamental reconceptualization of how education is designed, delivered, and assessed in the Indonesian context.

Furthermore, the global nature of contemporary challenges from climate change and social inequality to technological disruption and cultural polarization demands educational approaches that prepare students to navigate complexity, ambiguity, and rapid change. The integration of 21st century skills and character education provides a framework for developing what researchers term "future-ready" competencies that enable individuals to adapt, innovate, and contribute meaningfully to society regardless of how rapidly circumstances may change.

This introduction establishes the foundation for exploring how the strategic integration of 21st century skills and character education can serve as a catalyst for building Indonesia's future-ready generation. The subsequent analysis will examine the theoretical frameworks, empirical evidence, and practical implications of this educational transformation, drawing upon extensive research from the Scopus database to provide a comprehensive understanding of both the opportunities and challenges that lie ahead for Indonesian education as it strives to prepare its citizens for the complexities of the 21st century and beyond.

2. Literature Review

2.1. Conceptual Framework of 21st Century Skills and Character Education

The integration of 21st century skills with character education represents a paradigmatic shift in contemporary educational practice. Research demonstrates that 21st century skills encompass critical competencies including the Partnership for 21st Century Skills (P21) framework's foundational domains: learning and innovation skills (4Cs - critical thinking, creativity, communication, collaboration), information media and technology skills, and life and career skills [14]. In the Indonesian context, these global frameworks have been adapted through the Indonesian Partnership for 21st Century Skills Standards (IP-21CSS), which uniquely incorporates spiritual values and character building alongside traditional competencies [10].

Character education, defined as the deliberate cultivation of virtues such as integrity, empathy, resilience, and civic responsibility, serves as the moral foundation for technical competencies [15]. Systematic literature reviews reveal that character education research in Indonesia has diversified into multiple domains including learning strategies, psychology, and social empiricism, though notable gaps exist in addressing integrity-related themes and millennial challenges [16].

2.2. Indonesian Educational Policy Framework

Indonesia's educational transformation centers on the Merdeka Curriculum and Profil Pelajar Pancasila (Pancasila Student Profile), which articulates six key dimensions: beriman, bertakwa kepada Tuhan Yang Maha Esa, dan berakhlak mulia (faithful, devout to God Almighty, and noble character); berkebinekaan global (global diversity); bergotong royong (cooperation); mandiri (independence); bernalar kritis (critical reasoning); and kreatif (creativity) [17]. This framework represents Indonesia's unique synthesis of universal 21st century competencies with culturally grounded values derived from Pancasila [18].

The Strengthening Character Education (PPK) program, formalized through Presidential Regulation Number 87 of 2017, requires all educational institutions to implement character education focusing on five interrelated values: religiosity, nationalism, independence, cooperation, and integrity. Research indicates that the PPK program employs a three-center education strategy involving schools, families, and communities to strengthen character development [15].

2.3. Implementation Challenges and Barriers

Comprehensive research reveals significant implementation challenges for 21st century skills in Indonesian schools. Infrastructure disparities emerge as persistent barriers, with substantial inequalities between urban and rural areas hampering educational quality. Digital divide issues are pronounced, with studies showing that while 73.7% of Indonesians have internet access, significant gaps remain in digital literacy and technological integration in educational settings [19].

Teacher preparedness represents another critical challenge. Research indicates that 67% of teachers reported difficulties in operating devices and using online learning platforms during the COVID-19 pandemic. Studies examining teacher professionalism in facilitating 21st century skills reveal diverse perceptions among educators, with many understanding these skills broadly but requiring additional training for effective implementation [20].

2.4. Successful Implementation Models and Strategies

Despite challenges, research has identified successful models for implementing 21st century skills and character education. Project-based learning emerges as particularly effective, with studies in biology education using the Merdeka Curriculum showing strong development in communication skills, though creativity and innovation skills require more targeted interventions [21].

The integration of local wisdom and cultural elements demonstrates significant positive effects. Meta-analysis research reveals that local wisdom-based learning media has a strong effect (effect size = 1.237) on student character development [22]. This finding supports Indonesia's approach of contextualizing global competencies within local cultural frameworks [23].

2.5. Bibliometric Analysis of Research Trends

Bibliometric analysis of Indonesian education research reveals evolving patterns and contributions. Studies show that 21st century skills research has grown exponentially, with Indonesia emerging as a dominant contributor to learning approaches research in primary education, surpassing countries like the United States, Turkey, and the UK [24]. Research on digital literacy in Indonesian education began in 2017 and has shown significant growth through 2024, with the majority of publications found in SINTA-accredited journals [25].

However, methodological gaps exist in the research landscape. Most character education studies employ qualitative or quantitative approaches with limited use of mixed methods, highlighting opportunities for methodological innovation [16]. Additionally, research examining the effectiveness of different pedagogical approaches for developing specific 21st century skills requires further investigation [20].

2.6. Assessment and Evaluation Frameworks

The assessment of 21st century skills and character education presents significant methodological challenges. Traditional assessment methods prove inadequate for measuring complex competencies such as critical thinking, creativity, collaboration, and character development¹. Research reveals the need for comprehensive evaluation frameworks that address cognitive, affective, and psychomotor domains [10].

Indonesia's performance in international assessments provides context for these challenges. PISA 2022 results show Indonesia scoring below OECD averages in mathematics (366 points), reading (359 points), and science (383 points), with particularly concerning results in creative thinking where only 31% of students attained baseline proficiency compared to 78% across OECD countries [19].

2.7. Digital Transformation and Technology Integration

Meta-analysis research examining technology-based learning effects on Indonesian student outcomes reveals significant positive impact, with an overall effect size of 1.285, indicating large effects when properly implemented [19]. However, integration requires careful consideration of equity and access issues, with persistent gaps in connectivity, device availability, and digital skills among teachers and students [25].

The COVID-19 pandemic accelerated digital transformation efforts while highlighting existing inequities. Research indicates many low-income students and teachers lack digital devices and skills required for effective learning, creating important implications for equitable development of 21st century skills and character education [19].

2.8. Future Research Directions and Gaps

While existing research provides valuable insights, several areas require further investigation. Longitudinal studies tracking student development over time would provide better understanding of long-term effects of integrated approaches. The majority of existing studies

focus on perceptions and implementation processes rather than rigorous impact evaluations [19].

The cultural specificity of character education approaches requires more systematic investigation. While the Profil Pelajar Pancasila framework represents innovative integration of global competencies with local values, more research is needed to understand how this integration affects student development and preparation for global citizenship [19]. Additionally, research examining specific mechanisms through which character education enhances 21st century skills development would inform more targeted interventions.

3. Proposed Method

This study utilizes a systematic literature review approach to comprehensively analyze the integration of 21st century skills and character education within the Indonesian educational context. Relevant scholarly articles, policy documents, and empirical studies published in reputable journals indexed in the Scopus database were systematically collected and analyzed. The research process involved identifying key themes, synthesizing findings, and evaluating the effectiveness of various implementation strategies, with a particular focus on the Merdeka Curriculum and Profil Pelajar Pancasila framework. Data were critically examined to address gaps in the literature, assess current challenges, and highlight successful models for fostering future-ready competencies among Indonesian students. This method ensures a rigorous, evidence-based understanding of how 21st century skills and character education can be synergistically developed to prepare Indonesia's next generation for global challenges [26].

4. Results and Discussion

The integration of 21st century skills with character education represents a paradigmatic shift in educational philosophy that extends beyond traditional academic achievement to encompass holistic human development. Research reveals that this integration is grounded in multiple theoretical frameworks that emphasize the interconnected nature of cognitive, affective, and behavioral competencies necessary for success in contemporary society [27].

The theoretical foundation draws heavily from the Partnership for 21st Century Skills (P21) framework, which identifies three critical domains: learning and innovation skills (including the 4Cs - critical thinking, creativity, communication, and collaboration), information, media and technology skills, and life and career skills [28]. This framework aligns with Indonesia's educational aspirations as articulated in the Indonesian Partnership for 21st Century Skills Standards (IP-21CSS), which specifically incorporates spiritual values and character building alongside the traditional 4Cs [10].

Contemporary research emphasizes that 21st century skills are not merely technical competencies but represent fundamental literacies for navigating an increasingly complex, interconnected world [29]. These skills encompass foundational literacies (literacy, numeracy, scientific literacy, ICT literacy, and financial literacy), competencies (critical thinking, creativity, communication, and collaboration), and character qualities (curiosity, initiative, persistence, adaptability, leadership, and social awareness). The integration with character education ensures that these technical capabilities are grounded in ethical reasoning and moral development.

4.1. Empirical Evidence from Indonesian Educational Context

Extensive research from Indonesian educational settings demonstrates both the necessity and complexity of implementing 21st century skills and character education. The PISA 2022 results provide a sobering backdrop for this discussion, with Indonesia scoring 366 points in mathematics, 359 points in reading, and 383 points in science, all significantly below the OECD averages [30]. These results underscore the urgent need for educational transformation that goes beyond traditional academic metrics to develop comprehensive competencies.

4.2. Implementation Challenges and Barriers

Multiple studies have identified significant barriers to implementing 21st century skills in Indonesian schools. Research in vocational education reveals that while teachers and students generally perceive 21st century skills as "easy" to implement, there are significant differences in their experiences, particularly regarding communication skills [27]. This finding

suggests that the conceptual understanding of these skills exists, but practical implementation remains challenging.

Infrastructure disparities emerge as a persistent barrier, with significant inequalities between urban and rural areas hampering educational quality [31]. The digital divide is particularly pronounced, with research indicating that while 73.7% of Indonesians have internet access, substantial gaps remain in digital literacy and technological integration in educational settings [32]. Studies of digital literacy among junior high school students reveal varying competency levels across different components, including ability to use media, advanced digital media use, managing digital learning platforms, and ethics and safety in digital media use [32].

Teacher preparedness represents another critical challenge. Research indicates that 67% of teachers reported difficulties in operating devices and using online learning platforms during the COVID-19 pandemic [33]. Studies examining teacher professionalism in facilitating 21st century skills reveal diverse perceptions among educators, with many understanding these skills broadly to include not only the 4Cs but also technology competence, problem-solving abilities, innovation, religious character, and moral development [34].

4.3. Successful Implementation Models

Despite these challenges, research has identified several successful models for implementing 21st century skills and character education in Indonesian contexts. Evaluation studies of 4C skills implementation in various educational levels demonstrate positive outcomes when systematic approaches are employed.

Project-based learning emerges as a particularly effective pedagogical approach. Research in biology education using the Merdeka Curriculum shows that project-based learning can effectively develop 21st century skills, with communication skills showing the strongest development among students. However, the studies also reveal that creativity and innovation skills require more targeted interventions, with many students still performing below standard in these areas [35].

The integration of local wisdom and cultural elements has shown significant positive effects. Meta-analysis research demonstrates that local wisdom-based learning media has a strong effect (effect size = 1.237) on student character development [22]. This finding supports the Indonesian approach of contextualizing global competencies within local cultural frameworks.

4.4. The Merdeka Curriculum and Profil Pelajar Pancasila Framework

The introduction of the Merdeka Curriculum represents a significant policy initiative aimed at addressing the integration of 21st century skills and character education. This curriculum framework embodies the Profil Pelajar Pancasila (Pancasila Student Profile), which articulates six key dimensions: beriman, bertakwa kepada Tuhan Yang Maha Esa, dan berakhlak mulia (faithful, devout to God Almighty, and noble character); berkebinekaan global (global diversity); bergotong royong (cooperation); mandiri (independence); bernalar kritis (critical reasoning); and kreatif (creativity).

Research examining the Merdeka Curriculum's potential for developing 21st century skills reveals both promise and challenges. Studies indicate that the curriculum provides flexibility in learning, encourages creativity and critical thinking through student-centered approaches, and strengthens collaboration and communication skills. However, implementation faces obstacles including resource limitations, teacher preparedness, resistance to change, and the need for more flexible evaluation systems [36].

The Profil Pelajar Pancasila framework represents a unique synthesis of universal 21st century competencies with culturally grounded Indonesian values. Research demonstrates that this integration can be achieved through both intracurricular and co-curricular activities, including project-based learning, contextual teaching and learning, collaborative learning, and problem-based learning approaches. The Proyek Penguatan Profil Pelajar Pancasila (P5) specifically provides a structured mechanism for developing both character and 21st century skills through experiential learning projects [37].

4.5. Assessment and Evaluation Challenges

The assessment of 21st century skills and character education presents significant methodological challenges that are reflected in Indonesian research. Traditional assessment

methods, focused primarily on content knowledge, prove inadequate for measuring complex competencies such as critical thinking, creativity, collaboration, and character development.

Research on 4C skills assessment reveals the need for comprehensive evaluation frameworks that address cognitive, affective, and psychomotor domains [35]. Studies examining the implementation of 21st century skills in various subjects demonstrate that while teachers have begun to incorporate these skills into their lesson planning and teaching methods, assessment practices often lag behind [35].

The PISA 2022 creative thinking assessment provides additional insight into Indonesian students' capabilities and challenges. With a mean score of 19 out of 60 possible points in creative thinking, Indonesian students scored significantly below the OECD average of 33 points. Only 31% of Indonesian students attained baseline proficiency in creative thinking (Level 3), compared to 78% across OECD countries [38]. These results highlight the need for more systematic approaches to developing and assessing creative thinking capabilities.

4.6. Digital Transformation and Technology Integration

The role of digital technology in supporting 21st century skills development has gained increased attention, particularly following the COVID-19 pandemic. Meta-analysis research examining technology-based learning effects on Indonesian student outcomes reveals a significant positive impact, with an overall effect size of 1.285, indicating a large effect [39]. This finding suggests that when properly implemented, technology can serve as a powerful catalyst for developing 21st century competencies.

However, the integration of digital technology requires careful consideration of equity and access issues. Research on digital learning landscapes in Indonesia reveals persistent gaps in connectivity, device availability, and digital skills among teachers and students [33]. Studies examining digital literacy practices in elementary schools show that while ICT learning and media literacy approaches are commonly implemented, information literacy approaches remain underdeveloped [40].

The COVID-19 pandemic has accelerated digital transformation efforts but also highlighted existing inequities. Research indicates that many low-income students and teachers lack the digital devices and skills required for effective home-based learning. This digital divide has important implications for the equitable development of 21st century skills and character education.

4.7. International Comparative Perspectives

Comparative analysis of Indonesian education with international systems provides valuable insights into potential improvements and adaptations. Research comparing Indonesia with education systems in Europe, America, Asia, and Australia reveals significant differences in approaches to curriculum flexibility, assessment methods, and technology integration [41].

Finland's decentralized, trust-based approach emphasizes empowering schools and teachers to design locally relevant curricula while maintaining high standards. South Korea's model focuses on standardized assessments, continuous teacher development, and curriculum alignment. The United States prioritizes data-driven decision-making and stakeholder engagement. These models offer potential insights for Indonesian educational reform while respecting local contexts and values.

Studies examining best practices suggest that Indonesia could benefit from adopting curriculum flexibility, competency-based approaches, and enhanced technology utilization while maintaining its emphasis on cultural values and character development [42]. The challenge lies in adapting these international practices to Indonesia's unique cultural, geographical, and socioeconomic context.

4.8. Teacher Professional Development and Capacity Building

Teacher professional development emerges as a critical factor in the successful implementation of 21st century skills and character education. Research examining teacher needs assessments reveals multiple areas requiring attention, including pedagogical strategies, subject-specific knowledge, technology integration, classroom management techniques, and assessment methods [43].

Studies of teacher professionalism in facilitating 21st century skills demonstrate that while teachers understand the importance of these competencies, many require additional training and support to effectively implement them in classroom settings [34]. Meta-analysis

research on teacher quality in the digital era confirms that teacher competence significantly impacts educational outcomes across all levels of education [44].

Professional development programs focusing on 21st century learning applications show promise for improving both pedagogical and professional competencies. However, research indicates that sustainable teacher development requires ongoing support, mentoring, and systematic institutional changes rather than one-time training interventions [43].

4.9. Policy Implications and Strategic Recommendations

The research evidence points to several critical policy implications for strengthening the integration of 21st century skills and character education in Indonesia. First, there is a need for comprehensive curriculum reform that balances global competency requirements with local cultural values and contexts. The Merdeka Curriculum represents a positive step in this direction, but implementation requires sustained support and resources.

Second, teacher preparation and professional development programs must be systematically strengthened to ensure educators have the knowledge, skills, and confidence to implement integrated approaches to 21st century skills and character education. This includes both pre-service and in-service training programs that address pedagogical innovations, technology integration, and assessment methodologies.

Third, infrastructure development and digital equity must be prioritized to ensure that all students have access to the resources necessary for developing 21st century competencies. This includes not only physical infrastructure but also digital literacy development and ongoing technical support.

Fourth, assessment and evaluation systems must be reformed to better capture the full range of 21st century skills and character development outcomes. This requires moving beyond traditional standardized testing to include authentic assessment methods that evaluate critical thinking, creativity, collaboration, communication, and character development.

4.10. Future Research Directions and Limitations

While the existing research provides valuable insights into the integration of 21st century skills and character education in Indonesia, several areas require further investigation. Longitudinal studies tracking student development over time would provide better understanding of the long-term effects of integrated approaches. Additionally, more research is needed on the specific mechanisms through which character education enhances or supports the development of 21st century skills.

The majority of existing studies focus on perceptions and implementation processes rather than student outcomes, highlighting the need for more rigorous impact evaluations. Furthermore, research examining the effectiveness of different pedagogical approaches for developing specific 21st century skills would inform more targeted interventions.

The cultural specificity of character education approaches also requires more systematic investigation. While the Profil Pelajar Pancasila framework represents an innovative approach to integrating global competencies with local values, more research is needed to understand how this integration affects student development and preparation for global citizenship.

4.11. Synthesis and Implications for Indonesia's Future-Ready Generation

The comprehensive review of research evidence reveals that the integration of 21st century skills and character education represents both an opportunity and a challenge for Indonesian education. The theoretical foundations support this integration, and empirical evidence demonstrates that successful implementation is possible when systematic approaches are employed. However, significant barriers remain, including infrastructure limitations, teacher preparedness challenges, and assessment difficulties.

The Merdeka Curriculum and Profil Pelajar Pancasila framework provide a promising foundation for this integration, but successful implementation requires sustained commitment, resources, and support. The evidence suggests that Indonesia's approach of contextualizing global competencies within local cultural frameworks has merit, but ongoing research and refinement are necessary to optimize outcomes.

As Indonesia moves toward its Golden Indonesia 2045 vision, the development of a generation that possesses both 21st century competencies and strong character foundations becomes increasingly critical. The research evidence provides a roadmap for this development, emphasizing the need for integrated approaches that honor both global competency

requirements and local cultural values. Success in this endeavor will require sustained collaboration among policymakers, educators, communities, and international partners to ensure that all Indonesian students have the opportunity to develop as competent, ethical, and globally competitive citizens.

5. Conclusions

The integration of 21st century skills and character education in Indonesia demands a holistic, culturally grounded approach that aligns global competencies with Pancasila values. Empirical evidence demonstrates that project-based learning, local-wisdom integration, and the Merdeka Curriculum enhance critical thinking, collaboration, and moral development, yet infrastructure disparities, teacher preparedness, and traditional assessment methods remain significant barriers. Policy initiatives such as the Profil Pelajar Pancasila and Strengthening Character Education (PPK) offer a strategic framework, but require sustained investment in professional development, digital equity, and authentic evaluation to realize the Golden Indonesia 2045 vision. Future research should prioritize longitudinal impact studies, mixed-methods evaluations of pedagogical innovations, and systematic analyses of how character formation catalyzes 21st century competencies, ensuring that Indonesian learners become adaptable, ethical, and globally competitive citizens.

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