# Transforming Education in Indonesia: The Impact and Challenges of the Merdeka Belajar Curriculum

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Abstract. The "Merdeka Belajar" initiative, introduced by Indonesia's Ministry of Education, represents a significant shift towards a studentcentred learning approach. This manuscript aims to analyse the development, implementation, and outcomes of the Merdeka Belajar curriculum. The objectives are to evaluate the curriculum's impact on fostering critical thinking, creativity, and problem-solving skills among students and to identify the challenges faced during its implementation. The methodology involves a comprehensive literature review and content analysis, drawing on existing research and policy documents to provide a detailed overview of the curriculum's principles and pedagogical foundations. The results indicate that the Merdeka Belajar curriculum has positively influenced students' engagement and learning outcomes by promoting autonomy and integrating 21st-century skills. However, significant challenges persist, including logistical issues, teacher preparedness, and digital resource disparities. The findings suggest that while the curriculum has made strides in transforming Indonesian education, further efforts are needed to address these challenges. Recommendations include enhancing teacher training programs, improving infrastructure to support digital learning, and fostering greater collaboration between educational stakeholders. By addressing these areas, the Merdeka Belajar curriculum can more effectively achieve its goal of preparing students for the demands of the modern world.

Keywords: Mardeka Belajar; Educational Transformation; Indonesia.

# INTRODUCTION

The "Merdeka Belajar" initiative, introduced by Indonesia's Ministry of Education, Culture, Research, and Technology, represents a significant transformation in the country's educational paradigm. Officially launched through a Ministerial Decree in early 2022 and spearheaded by Minister Nadiem Makarim since 2019, this curriculum, also known as the "Freedom Curriculum," aims to create a more autonomous, student-centred learning environment [1, 2, 3]. Moving away from traditional rote learning methodologies, this reform promotes student engagement, critical thinking, and independence to develop essential 21st-century skills. The Merdeka Curriculum addresses long-standing issues in Indonesia's education system, such as overemphasising examinations and lacking vital and creative capacity development. By reducing the pressure of national exams and integrating vital 21st-century skills like digital literacy and collaborative problem-solving, the curriculum allows schools to adapt content to local contexts and diverse student learning styles [4, 5, 6]. Including projectbased learning and the Sustainable Development Goals (SDGs) further enhances this approach, aiming to create a more engaging and relevant educational experience for students.

The urgency for this reform was highlighted by the COVID-19 pandemic, which necessitated a rapid shift to online learning and exposed the inadequacies of the existing educational frame-

work in addressing the diverse needs of students. teachers, and parents. The pandemic underscored the importance of a curriculum that supports independent learning and digital literacy. To address these challenges, the Merdeka Curriculum emphasises teacher empowerment, providing educators with greater pedagogical freedom and professional development opportunities to facilitate innovative teaching methodologies [7, 8, 9]. The novelty of the Merdeka Curriculum lies in its holistic approach to education reform. Unlike previous curricula predominantly focused on rote memorisation and standardised testing, the Merdeka Curriculum advocates for a comprehensive educational strategy integrating higher-order thinking skills, STEM education, and project-based learning. This approach aims to cultivate a generation of students capable of critical thinking, problem-solving, and adapting to the ever-evolving demands of the global economy. The curriculum's emphasis on inclusivity ensures that educational equity is addressed, catering to Indonesia's diverse socio-economic and cultural landscape [10, 11, 12].

Recent systematic literature reviews on the Merdeka Learning Curriculum have explored various aspects of curriculum development, implementation, and outcomes. These reviews highlight the curriculum's focus on independent and self-directed learning, aligning with 21stcentury educational needs. The curriculum emphasises developing critical thinking, collaboration, creativity, and communication skills essential for modern education. Additionally, integrating Information and Communication Technology (ICT) into learning activities is crucial, as it enhances the learning process and is positively perceived by teachers. The Merdeka Curriculum also addresses the readiness for self-directed learning among Asian students, including those in Indonesia, influenced by problem-based learning processes, assessments, and learning environments. However, some challenges persist, as students may become overly dependent on faculty direction in specific learning environments. Moreover, the development of interactive multimedia learning courseware has been explored to strengthen students' character, integrating principles of interactive multimedia learning with observational learning models and national historical events.

Implementing project-based learning activities, such as strengthening the Pancasila student profile, enhances student engagement and outcomes in Indonesian schools. Professional English lan-

guage teaching perspectives in the Industry 4.0 era have been investigated to understand how English as a Foreign Language (EFL) lecturers can maintain professionalism and effectively meet current teaching and learning needs. Additionally, evaluations of Islamic education curriculum policies have assessed the factors influencing curriculum policy implementation in schools. The Merdeka Learning Curriculum's emphasis on simplicity, depth, independence, relevance, and interactivity focuses on essential learning materials and developing student competencies at each educational stage. Its student-centered approach allows educational units, teachers, and students the freedom to innovate, create, and learn independently. This flexibility enhances the quality of the learning process and gives teachers and school principals the autonomy to develop curricula tailored to students' needs and potentials.

The Merdeka Learning Curriculum is pivotal in Indonesia's educational landscape, emphasising student-centred learning and acquiring essential 21st-century competencies and skills. This curriculum aims to prepare students for the complexities of the modern world by fostering critical thinking, creativity, collaboration, and communication. It incorporates thematic learning, roleplaying methods, and the Living Values Education Program to create inclusive and engaging learning environments that support holistic student development. One of the most significant aspects of the Merdeka Curriculum is its emphasis on independence and innovation. This curriculum allows students, teachers, and schools to tailor learning experiences to contemporary needs and contexts. This adaptability is crucial in a rapidly changing global landscape, where the ability to respond to new challenges and opportunities is vital to success. By encouraging innovation, the Merdeka Curriculum helps students develop a strong national spirit and leadership qualities, equipping them to become proactive and responsible citizens.

Moreover, the curriculum's focus on enhancing Pedagogic Content Knowledge (PCK) among teachers is essential for improving teaching effectiveness and student engagement. By empowering educators with advanced pedagogical skills, the Merdeka Curriculum ensures that learning is practical but also engaging and meaningful. This focus on teacher development is critical in creating a dynamic and responsive educational environment where students can thrive.

The Merdeka Curriculum also integrates problem-based learning models and e-books to bolster students' problem-solving abilities, a vital competency in contemporary education. Problem-based learning encourages students to engage actively with real-world problems, fostering critical thinking and practical application of knowledge. Additionally, using e-books and other digital resources enhances the accessibility and relevance of learning materials, aligning education with the digital age. Furthermore, the curriculum aims to revitalise local language curricula, incorporating sustainable development goals and promoting project-based learning in biotechnology. These elements address current and future societal needs, ensuring that education remains relevant and impactful. By integrating these components, the Merdeka Curriculum supports the development of academically proficient students and socially and environmentally conscious [13].

Implementing the Merdeka Curriculum has significant implications for various stakeholders, including teachers, parents, education stakeholders, and the community. It necessitates a shift in teaching paradigms towards more engaging, meaningful, and sustainable teaching modules. This transition is essential to achieve optimal learning outcomes and meet students' diverse needs in today's world. Additionally, the curriculum highlights the importance of emotional intelligence, spiritual intelligence, and self-efficacy in enhancing the performance of principals and teachers within the educational system. The Merdeka Curriculum ensures that academic leaders are well-equipped to foster a supportive and effective learning environment by focusing on these aspects. This holistic approach to education reform is designed to create a well-rounded, resilient student body capable of meeting future challenges.

This literature review aims to comprehensively analyse the Merdeka Learning Curriculum, examining its development, implementation, and future directions within Indonesia's educational framework. This review aims to identify the key issues and challenges faced during the curriculum's adoption, assess the strategies and methodologies employed, and evaluate the outcomes and impacts on various stakeholders, including students, teachers, and educational institutions. By synthesising existing research, the review seeks to offer insights into the effectiveness of the Merdeka Curriculum in addressing the edu-

cational needs of the 21st Century and its role in fostering critical thinking, creativity, and adaptability among students. Furthermore, this literature review intends to highlight the innovations and best practices emerging from implementing the Merdeka Curriculum, providing a basis for future improvements and policy recommendations. It seeks to explore the broader implications of the Curriculum on Indonesia's educational system and its alignment with global educational trends and standards. Ultimately, the review aims to contribute to the ongoing discourse on educational reform in Indonesia, offering a wellrounded perspective on the strengths and areas for enhancement within the Merdeka Learning Curriculum.

The primary objectives of this literature review are threefold. First, it seeks to identify and analyse the critical issues associated with implementing the Merdeka Learning Curriculum in Indonesia. This includes exploring the challenges educators, students, and policymakers face in adapting to the new curriculum framework and its impact on the educational environment. By highlighting these issues, the review aims to clearly understand the obstacles that must be addressed for successful curriculum adoption. Second, the review aims to assess the development and implementation strategies of the Merdeka Learning Curriculum. This involves examining the curriculum design principles and pedagogical approaches and integrating innovative teaching methodologies. The goal is to evaluate how these strategies contribute to the curriculum's effectiveness in enhancing student learning outcomes and promoting essential 21stcentury skills such as critical thinking, creativity, and collaboration. Finally, the review intends to explore the future directions for the Merdeka Learning Curriculum. This includes identifying potential areas for improvement and providing recommendations for policy and practice that can support the ongoing development of the curriculum. By doing so, the review aims to ensure that the curriculum remains relevant and responsive to the evolving needs of Indonesia's educational landscape.

The Merdeka Learning Curriculum, a transformative educational framework introduced in Indonesia, signifies a substantial departure from traditional teaching methods and curricular designs. Its inception and progressive implementation have spurred extensive scholarly interest, aiming to assess its effectiveness and impact compared

to domestic and international standards. This section synthesises prevailing research to elucidate the curriculum's developmental trajectory, evaluates its execution, and delineates future scholarly and practical directions. The Merdeka Curriculum represents a paradigm shift from its predecessor, the 2013 curriculum. Authors [12] meticulously analyse this evolution, emphasising a strategic shift towards more holistic and flexible learning paradigms designed to foster student autonomy and critical thinking. This evolution is not merely a local reform but is part of a broader attempt to align Indonesian education with global standards. Here, the comparison with international benchmarks becomes pertinent. Authors [14] draw parallels with the Finnish education system, renowned for its student-centred approach and high educational outcomes. Their comparative study reveals that while the Merdeka Curriculum aspires to similar standards, gaps remain in areas such as teacher autonomy and continuous professional development, highlighting potential areas for enhancement.

Central to the Merdeka Curriculum is the adoption of thematic learning and formative assessments intended to integrate values education seamlessly into the academic fabric. Authors [5] provide an in-depth analysis of how these elements are designed to interlace with the curriculum's core objectives, aiming to cultivate a wellrounded character in students. Similarly, authors [15] focus on the values education component, arguing that integration is pivotal for moulding responsible citizens. Another significant aspect of the curriculum's application is the Kampus Merdeka initiative, which allows students to undertake internships and projects beyond traditional classroom boundaries. Authors [16] evaluate this initiative, noting its effectiveness in bridging theoretical knowledge with practical skills and enhancing employability and entrepreneurial capabilities. Authors [14] discuss the development of specialised teaching modules that have been instrumental in adapting traditional teaching methodologies to more dynamic and interactive formats. These modules are critical in facilitating the transition to a more engaged and experiential learning environment.

Despite the progressive aims of the Merdeka Curriculum, its implementation is full of challenges. Authors [17] address significant hurdles in developing thematic learning tools, which are essential for the effective delivery of integrated education. They suggest insufficient teacher training and resource allocation hamper the realisation of thematic learning objectives. Moreover, identify issues in the assessment methodologies that need help accurately measuring student performance in such a diversified learning environment. They propose enhancements in assessment techniques to better align with the curriculum's educational goals.

Additionally, the revitalisation of local language curricula remains a contentious issue. Authors [13] examine educators' difficulties in incorporating local languages into the curriculum, which is crucial for preserving cultural heritage while promoting national identity. They recommend a more structured approach to curriculum design that includes local languages as a core component of the educational framework.

With its innovative approach to education, the Merdeka Learning Curriculum of Indonesia represents a significant step forward in aligning with global educational standards and addressing contemporary educational needs. While it marks a substantial improvement over previous curricula, its successful implementation requires ongoing evaluation and adaptation. By addressing the identified challenges and incorporating international best practices, the Merdeka Curriculum can better fulfil its promise of developing competent, creative, and culturally aware citizens. Continued research and practical adjustments will be vital in refining the curriculum and achieving its full educational potential.

# METHOD

The methodology utilised in this research involves thoroughly examining existing literature, guided by the insights of [18, 19]. Through this method, the study seeks to locate pertinent references related to the research problem, field of study, theory, and subject matter. The literature review aims to offer a comprehensive summary of already-explored knowledge within the domain, consolidating various sources to provide a coherent overview. This process underscores the chosen topic's relevance and appropriateness within the broader research context, informing readers of its significance and potential contributions.

Furthermore, the review employs content analysis, a systematic approach to deciphering the meaning and communication of messages. Following an interactive model outlined by [20], the content analysis progresses through four interconnected stages: data collection, data simplification, presentation of findings, and drawing and testing conclusions. The analytical constructs utilised in this process may stem from established theory or practice, expert knowledge, or previous research, as suggested by [21].

The critical examination presented in this article relies on the foundation of literature review. This method is employed to delve into social issues, specifically self-harming behaviour, bullying as a form of violence, and students' mental health. The literature analysis encompasses various relevant sources, drawing from diverse academic databases and reputable platforms such as Google Scholar. By adopting this approach, a deeper understanding of these issues within school environments is cultivated. The focus on these problems is rigorously scrutinised through the lens of literature references, ultimately fostering critical thinking to enhance comprehension of such forms of violence.

#### **RESULTS AND DISCUSSION**

**Background of Medeka Learning Curriculum**. The "Merdeka Belajar" initiative marks a transformative juncture in the evolution of Indonesia's educational framework. It aims to recalibrate the system to better align with global educational standards and the difficulties of the 21st Century. This section delves into the historical backdrop, policy underpinnings, core ideologies, and pedagogical bedrock and delineates a comparative analysis with antecedent curricula.

a) Historical Development and Policy Context. Initiated under the stewardship of Nadiem Makarim, the Minister of Education and Culture since 2019, the "Merdeka Belajar" initiative emerged as a countermeasure to the prevailing educational challenges, epitomised by a centralised, exam-centric, and rote learning-dominated ethos. This reformative trajectory is informed by a nuanced understanding of the historical oscillations between centralisation and decentralisation within Indonesian education, reflecting a conscientious pivot towards fostering innovation and creativity and preparing students for the intricate demands of contemporary life. The policy genesis of this initiative is enriched by the historical evolution of language policy, identity, and bilingual education in Indonesia [22], alongside

the curriculum reforms tailored to synergise global trends with indigenous knowledge [15].

b) Core Principles and Pedagogical Foundations. The "Merdeka Belajar" curriculum is grounded in core principles and pedagogical foundations designed to revolutionise the educational landscape in Indonesia. It focuses on student-centred learning, autonomy, integration of 21st-century skills, holistic assessment, and professional development for educators. These foundational elements aim to nurture a generation of learners with the knowledge, skills, and attitudes necessary for success in a rapidly evolving global context.

1. *Student-Centered Learning*: The Curriculum places the student at the heart of the learning process, emphasising personalised learning experiences that cater to individual interests, learning styles, and developmental needs. This approach encourages active engagement, inquiry, and exploration, enabling students to take ownership of their learning journey [23, 24].

2. *Flexibility and Autonomy*: Recognising the diversity of student needs and the importance of contextual relevance, the "Merdeka Belajar" curriculum grants schools and educators significant autonomy in curriculum design and delivery. This flexibility allows for incorporating local content, adapting teaching materials, and developing innovative learning experiences that resonate with students' realities.

3. *Emphasis on 21st-Century Skills*: The Curriculum strongly emphasises cultivating essential 21st-century skills across all disciplines, encompassing critical thinking, digital literacy, and collaborative problem-solving, which are vital for navigating the complexities of the modern era [25, 26].

4. *Holistic Assessment*: Advocating for a departure from the traditional reliance on standardised testing, the Curriculum champions a holistic assessment ethos, employing formative and project-based evaluations to furnish a more rounded perspective on student achievement and learning progression.

5. *Professional Development for Teachers*: Acknowledging educators' pivotal role in successfully deploying the new curriculum, the initiative underscores the importance of comprehensive professional development, offering many training programs and resources to facilitate pedagogical innovation.

The "Merdeka Belajar" curriculum represents a significant shift in Indonesia's education system to foster a more dynamic, student-centred learning environment. It is built on five core principles designed to prepare students for success in the global landscape. First, it emphasises studentcentred learning, placing students at the forefront of their educational journey and tailoring learning experiences to their unique needs and interests. Second, it grants schools and educators the flexibility to design and deliver the curriculum in ways that best suit their students, allowing for integrating local content and innovative teaching methods. Third, the curriculum focuses on developing 21st-century skills like critical thinking, digital literacy, and collaboration, which are crucial for navigating today's complex world. Fourth, it moves from standardised testing towards holistic assessment methods that comprehensively view student progress. Lastly, it prioritises teacher professional development, offering training and resources to support adopting new pedagogical strategies. These foundational elements collectively aim to nurture a generation of independent learners and thinkers equipped to face future challenges.

c) Comparison with Previous Curricula. The "Merdeka Belajar" curriculum represents a paradigm shift from its predecessors, with a pronounced emphasis on fostering independent thinking, diminishing the centrality of national exams, and elevating teacher autonomy. Unlike prior curricula, which predominantly focused on memorisation, the current framework is designed to engender critical thinking, problemsolving capabilities, and the application of knowledge in varied contexts. This reformative approach also distinguishes itself through a heightened focus on digital literacy and technology integration in education, mirroring the increasing significance of these competencies in today's world. Furthermore, the curriculum embraces a lifelong learning ethos, advocating for adaptability and ongoing personal and professional development, resonating more profoundly with the workforce's and society's dynamic requisites.

The "Merdeka Belajar" initiative heralds a significant departure from traditional educational paradigms, steering towards a more dynamic, flexible, and student-centred approach. By prioritising essential skill development, championing educator innovation, and attenuating the focus on standardised assessments, it aspires to equip Indonesian students with the tools necessary to thrive amid the challenges and opportunities of the 21st Century.

*Implementation Challenges.* Implementing the "Merdeka Belajar" curriculum, heralded as a progressive shift in Indonesian education, faces multifaceted challenges spanning logistical, infrastructural, teacher preparedness, and student engagement domains. These challenges are critical to the curriculum's potential to revolutionise educational practices.

a) Logistical and Infrastructural Issues. The broad scope of the "Merdeka Belajar" curriculum demands substantial logistical and infrastructural underpinning, especially given Indonesia's geographical diversity and the varying capabilities of its regional education systems. The effective deployment of this initiative is encumbered by disparities in digital resource access, educational infrastructure, and the readiness of local education systems to embrace such a sweeping reform. The curriculum's decentralisation and emphasis on flexibility require investments in infrastructure and innovative solutions to bridge the digital divide, ensuring equitable quality of education across urban, rural, and remote areas. The integration of local languages and the shift towards an industrial education mindset underscore the need for resources that support practical, technology-enabled learning experiences and infrastructure that accommodates the curriculum's forward-looking aims [13, 27].

b) Teacher Preparedness and Training Concerns. The pivot to a student-centred approach underlines the necessity for a paradigm shift in teaching methodologies, necessitating a comprehensive spectrum of professional development for educators. The variability in teacher readiness, especially in adapting to new technologies and pedagogical strategies, poses significant hurdles to the curriculum's successful adoption. Challenges such as inadequate teacher training resources, the demotivation of educators, and the lack of a robust induction framework for new teachers are exacerbated by disparities in urbanrural educational resources. A concerted effort focusing on continuous professional development, including training in innovative teaching methods and digital literacy, is imperative to mitigate these issues. This strategy must be responsive to the multifaceted factors influencing teacher readiness, from policy perception to practical competencies in curriculum delivery [28, 29].

c) Student Engagement and Adaptability. Cultivating a conducive environment for student engagement and adaptability is central to the "Merdeka Belajar" Curriculum's ethos, aiming to foster independent learning and critical thinking. This objective necessitates a departure from traditional education models towards a system involving students in their learning journey. However, enhancing student engagement is contingent upon addressing individual learning needs, incorporating technology-driven adaptive learning systems, and aligning educational content with real-world applications and government policies. The role of educators in customising the curriculum to enhance student engagement, alongside strategic modifications to accommodate special needs, is crucial. Applying adaptive learning technologies and community involvement projects can significantly enrich the learning experience, promoting a dynamic and responsive educational setting [30, 31].

In addressing these implementation challenges, the overarching success of the "Merdeka Belajar" initiative hinges on a holistic strategy that includes infrastructural enhancements, targeted teacher training programs, and fostering an engaging and adaptable learning environment. Overcoming these barriers is essential for realising the curriculum's vision of nurturing a generation of independent learners and thinkers ready to navigate the complexities of the 21st Century.

The "Merdeka Belajar" Curriculum's advancement and successful deployment are fundamentally anchored in targeted governmental interventions, synergistic collaborations with vital educational stakeholders, and the strategic infusion of technology into the academic milieu. These elements are critical in surmounting prevailing challenges and fostering a dynamic educational landscape conducive to student-centric learning.

**Technological integration and digital learning platforms.** The "Merdeka Belajar" Curriculum's advancement and successful deployment are fundamentally anchored in targeted governmental interventions, synergistic collaborations with vital educational stakeholders, and the strategic infusion of technology into the educational milieu. These elements are critical in surmounting prevailing challenges and fostering a dynamic academic landscape conducive to student-centric learning. a) Government Initiatives and Policy Adjustments. The Indonesian government's initiatives and policy reforms are central to the curriculum's framework, which aims to bolster the "Merdeka Belajar" ethos. These include:

1. *Policy Reforms*: Minister Nadiem Makarim's introduction of policies such as the Independent Learning-Independent Campus initiative underscores a decisive move towards educational autonomy, emphasising the importance of independent learning concepts across educational levels [32].

2. *Curriculum Management Enhancement*: Efforts to refine curriculum management and assessment systems in higher education institutions reflect a commitment to align educational frameworks with independent learning methodologies [33].

3. *Adaptation to Contemporary Needs*: Adapting the independent curriculum, including in Islamic religious higher education, illustrates the government's resolve to tailor educational experiences to foster talent interests and reinforce national values amidst challenges such as the COVID-19 pandemic [34].

b) Collaboration with Educational Stakeholders. Collaboration with various educational stakeholders is pivotal to the curriculum's success. This entails:

1. *Multi-Stakeholder Engagement*: The curriculum's efficacy hinges on technological readiness and collaborative input from central and local governments, educational institutions, teachers, and the community, ensuring the curriculum resonates with the learners' diverse needs [34].

2. *Incorporating Stakeholder Perspectives*: Engaging stakeholders, including academics and librarians, in curriculum design, is essential for integrating comprehensive skill sets like information literacy, thus fostering a curriculum that addresses holistic student development [35].

c) Technological Integration and Digital Learning Platforms. The curriculum's success is significantly augmented by the integration of technology and digital learning platforms, necessitating:

1. *Strategic Technology Infusion*: Adopting stateregulated digital education platforms is critical for facilitating seamless technology integration into teaching and learning processes, underscoring the need for educational institutions and government backing [17, 36]. 2. *Adapting to Emergency Pedagogies*: The global pivot to digital education platforms, especially accentuated during the COVID-19 pandemic, highlights the urgency of adapting educational practices to leverage digital platforms effective-ly [37].

Through these concerted efforts spanning government-led initiatives, stakeholder collaboration, and the judicious incorporation of technology, the "Merdeka Belajar" curriculum aspires to cultivate an educational environment that is not only adaptable and inclusive but also wellequipped to prepare students for the multifaceted challenges and opportunities of the 21st Century. These strategies collectively aim to enhance the curriculum's impact, ensuring its alignment with contemporary educational paradigms and the evolving needs of learners.

*Impact Assessment.* The "Merdeka Belajar" curriculum represents a landmark educational reform in Indonesia, underscored by its commitment to fostering academic excellence, skill development, and addressing sociocultural dynamics. Its impact, domestically and in comparison with global educational reforms, necessitates a nuanced assessment across various dimensions.

a) Academic Outcomes and Skill Development. The curriculum's focus on enhancing academic outcomes and skill development has introduced a paradigm shift in Indonesia's educational landscape. Its emphasis on digital literacy and integrating 21st-century skills reflects a concerted effort to align with global academic standards. The curriculum's impact on reducing educational disparities, particularly in underserved regions, and its effectiveness in promoting students' critical thinking, creativity, and problem-solving skills are key assessment areas. Moreover, the curriculum's alignment with outcome-based education (OBE) principles and incorporation of professional skills and employability attributes underscore its potential to significantly enhance students' readiness for the workforce [38, 39].

b) Sociocultural Implications and Community Feedback. The "Merdeka Belajar" Curriculum's sociocultural impact, evidenced through its integration of industrial mindset principles and disaster mitigation concepts, reflects a holistic approach to education beyond traditional academic boundaries. Community feedback, particularly from educators, students, and parents, provides critical insights into the curriculum's practicality, its influence on student behaviour and national identity, and its capacity to foster cultural diversity and inclusion. The curriculum's role in preparing students for Industry 4.0 and emphasising societal needs and challenges marks a significant shift towards a more adaptable and innovative educational framework [40, 41].

Comparative Analysis with International Educational Reforms. A comparative analysis reveals that the "Merdeka Belajar" curriculum shares several objectives with global educational reforms, such as enhancing student autonomy, integrating technology, and focusing on skill development for employability. However, its unique emphasis on local content integration, disaster preparedness, and promoting an industrial mindset distinguishes it from other reforms. The curriculum's approach to stakeholder collaboration and adaptability in the face of challenges, such as the COVID-19 pandemic, align with international best practices, highlighting the importance of flexibility and resilience in education systems [42, 43].

By evaluating the "Merdeka Belajar" curriculum through these lenses, it becomes evident that while significant strides have been made, continuous assessment and adaptation are necessary to realise its full potential. This comprehensive analysis underscores the curriculum's transformative impact on Indonesia's educational system and its alignment with and contribution to global educational advancements. The curriculum's ongoing development and refinement, informed by stakeholder feedback and comparative insights, will be crucial in navigating the evolving demands of the 21st Century and ensuring its sustained success.

*Future Directions.* The "Merdeka Belajar" curriculum sets a transformative precedent for Indonesia's education sector by emphasising a student-centric approach. To bolster its efficacy and sustainability, it is pivotal to integrate insights from comparative international studies, contemporary research on curriculum development, and inclusive education strategies. This integration enriches the curriculum and ensures alignment with global educational trends and local sociocultural contexts.

a) Recommendations for Curriculum Enhancement. The recommendations for enhancing the "Merdeka Belajar" curriculum emphasise creating a dynamic and flexible educational framework responsive to global trends and local needs. Essential suggestions include adopting a responsive curriculum design that is regularly updated based on stakeholder feedback and current research, ensuring its relevance and effectiveness. Enhanced digital integration is also crucial, focusing on developing students' digital literacy and competency to navigate a digitised world responsibly. Finally, the curriculum should offer inclusive and diverse pathways that cater to students' varied interests and abilities and provide each learner with meaningful and relevant educational experiences. These enhancements, inspired by insights from notable educational research, aim to prepare students more effectively for the challenges of the contemporary world.

1. *Responsive Curriculum Design*: Leverage insights from [42, 43] to establish a responsive curriculum framework that prioritises adaptability to global educational trends and local needs. This framework involves regular updates based on comprehensive stakeholder feedback and current academic research, ensuring the curriculum remains relevant and practical.

2. *Enhanced Digital Integration*: Drawing from the emphasis on digital literacy in global educational reforms, incorporate structured digital competency frameworks to prepare students for a digitised world. This includes safe, ethical, and productive technology use, supported by a curriculum that evolves with technological advancements [44, 45].

3. *Inclusive and Diverse Pathways*: Inspired by [46, 47], expand the curriculum to offer diverse educational pathways. This will cater to varied learner interests and abilities, ensuring students can engage meaningfully with their education and find relevance in their learning experiences.

b) Fostering Innovation and Critical Thinking Skills.

1. Incorporating Problem-Based Learning Utilise problem-based and project-based learning across disciplines to foster practical application of knowledge. This strategy, supported by insights from [48, 49], enhances students' innovation, critical thinking, and problem-solving skills.

2. *Industry Collaboration*: Strengthen ties with the private sector and industry to provide students real-world challenges and opportunities. Such collaboration encourages innovation and prepares students for future employment, drawing inspiration from global best practices in educational-industry partnerships.

3. *Continuous Professional Development*: Ensure ongoing training opportunities for educators in innovative teaching methods and critical thinking, as recommended by [16, 50]. This empowers teachers to facilitate rather than direct learning, fostering a more engaging and reflective class-room environment.

c) Strategies for Sustainable and Inclusive Education

1. *Guaranteeing Universal Access*: Address educational disparities by ensuring equitable distribution of resources and digital access. Global initiatives inspire this approach focused on reducing barriers to education, emphasising the need for infrastructure that supports inclusive learning [51, 52].

2. *Promoting Cultural and Social Sensitivity*: Incorporate cultural and social sensitivity into the curriculum to foster an environment that respects and celebrates diversity. This strategy, reflecting insights from [53, 54], promotes unity and understanding among Indonesia's diverse populations.

3. *Embedding Environmental Education*: Inspired by global sustainable education goals, integrate environmental education and sustainability principles throughout the curriculum. This cultivates a generation committed to sustainable living and ecological stewardship [55, 56].

4. *Encouraging Lifelong Learning*: Introduce flexible learning modules, online platforms, and community learning initiatives to foster a culture of lifelong learning. Authors [57, 58] support this approach, which provides continuous educational opportunities beyond formal schooling.

Adopting these future directions, the "Merdeka Belajar" curriculum can evolve into a more dynamic, inclusive, and forward-thinking framework. It aligns Indonesia's educational practices with international standards while respecting local cultural and social nuances, ensuring students are well-prepared for the complexities of the modern world and the future workforce.

The "Merdeka Belajar" curriculum marks a significant evolution in Indonesia's education system, aiming to create a more student-centric, adaptable, and inclusive framework. This initiative seeks to align Indonesian education with global educational trends and local sociocultural contexts, drawing on insights from international studies and contemporary research. Recommendations for its enhancement include developing a responsive curriculum design that regularly incorporates stakeholder feedback and current educational research, ensuring ongoing relevance and effectiveness. Additionally, the integration of structured digital competency frameworks is emphasised to equip students for the digital age and provide inclusive and diverse learning pathways that cater to individual interests and abilities.

To foster innovation and critical thinking, the curriculum advocates for problem-based and project-based learning across all disciplines, industry collaborations for real-world learning opportunities, and continuous professional development for educators to adopt innovative teaching methods. Further strategies for making education sustainable and inclusive involve ensuring universal access to resources, promoting cultural and social sensitivity, embedding environmental education, and encouraging lifelong learning through flexible learning modules and community initiatives. These future directions aim to transform the "Merdeka Belajar" curriculum into a dynamic framework that prepares students for the modern world's complexities, aligning Indonesia's educational practices with international standards and accommodating the nation's diverse cultural and social landscape.

#### CONCLUSIONS

The "Merdeka Belajar" initiative marks a significant milestone in the evolution of Indonesia's education system. It emphasises a shift from traditional, exam-centric methods to a more holistic, student-centered approach. This transformation aims to foster critical thinking, creativity, and problem-solving skills essential for the 21st Century. Despite its positive impact on student engagement and learning outcomes, several challenges impede its full potential. Logistical issues, disparities in digital resource availability, and varying levels of teacher preparedness are critical obstacles that need addressing.

Enhancing teacher training programs to overcome these challenges is imperative, ensuring educators can implement innovative teaching methods and effectively leverage digital tools. Improving educational infrastructure, particularly in remote and underserved areas, is crucial to providing equitable learning opportunities. Additionally, fostering collaboration among educational stakeholders, including policymakers, educators, and communities, can facilitate a more integrated and supportive implementation process.

While the Merdeka Belajar curriculum has made commendable strides in transforming Indonesian education, continuous evaluation and adaptation are necessary to realise its goals fully. By addressing the identified challenges and building on the initial successes, the initiative can significantly prepare Indonesian students for the complexities and opportunities of the modern world, ensuring they become competent, creative, and responsible global citizens.

# REFERENCES

- 1. Fajri, T. A. A., & Andarwulan, T. (2023). Implementation Of The Merdeka Curriculum In Indonesia: Challenges And Opportunities. *Erudio Journal of Educational Innovation*, *10*(2).
- Mulyadin, T., Muhammad Khoiron, Dion Ginanto, & Kristian Adi Putra. (2023). Workshop on Kurikulum Merdeka (Freedom Curriculum): Dismantling Theories and Practices. *BEMAS: Jurnal Bermasyarakat*, 3(2), 126–132. doi: 10.37373/bemas.v3i2.265
- 3. Utami, Y. P., & Suswanto, B. (2022). The Educational Curriculum Reform in Indonesia: Supporting "Independent Learning Independent Campus (MBKM)." SHS Web of Conferences, 149, 01041. doi: 10.1051/shsconf/202214901041
- Efendi, Moch. Y., & Hsi, N. L. (2020). The Comparison of Elementary Curriculum Education between Indonesia and Singapore. *Journal Of Teaching And Learning In Elementary Education (JTLEE)*, 3(1), 22. doi: 10.33578/jtlee.v3i1.7323
- 5. Anisa Sari, G. M., Antika, V. Y., Wisutama, R. A., Syiami, L. N., Sulaeman, N. F., Nuryadin, A., & Subagiyo, L. (2022). New Indonesian Science Curriculum for Junior High School: A Content Analysis to Support STEM SDGs. Jurnal Literasi Pendidikan Fisika (JLPF), 3(2), 176–182. doi: 10.30872/jlpf.v3i2.1555

- 6. Shpeizer, R. (2019). Towards a Successful Integration of Project-based Learning in Higher Education: Challenges, Technologies and Methods of Implementation. *Universal Journal of Educational Research*, 7(8), 1765–1771. doi: 10.13189/ujer.2019.070815
- Mohd Basar, Z., Mansor, A. N., Jamaludin, K. A., & Alias, B. S. (2021). The Effectiveness and Challenges of Online Learning for Secondary School Students – A Case Study. *Asian Journal of University Education*, 17(3), 119. doi: 10.24191/ajue.v17i3.14514
- 8. Ebardo, R., & Wibowo, S. (2021). I Work to Learn: The Lived Experiences of Working Students in Online Learning during COVID-19. Retrieved from https://www.researchgate.net/publication/356194963\_I\_Work\_to\_Learn\_The\_Lived\_Experience s\_of\_Working\_Students\_in\_Online\_Learning\_during\_COVID-19
- 9. Husni Rahiem, M. D. (2021). Indonesian University Students' Likes and Dislikes about Emergency Remote Learning during the COVID-19 Pandemic. *Asian Journal of University Education*, *17*(1), 1. doi: 10.24191/ajue.v17i1.11525
- 10. Alhayat, A., & Arifin, Z. (2023). Evaluation of Science curriculum: A literature study. *Inovasi Kurikulum, 20*(2), 239–250. doi: 10.17509/jik.v20i2.58887
- 11. Arlinwibowo, J., Retnawati, H., & Kartowagiran, B. (2021). How to Integrate STEM Education in The Indonesian Curriculum? A Systematic Review. *Challenges of Science*. doi: 10.31643/2021.03
- 12. Prasetyono, H., Abdillah, A., Djuhartono, T., Ramdayana, I. P., & Desnaranti, L. (2021). Improvement of teacher's professional competency in strengthening learning methods to maximise curriculum implementation. *International Journal of Evaluation and Research in Education (IJERE), 10*(2), 720. doi: 10.11591/ijere.v10i2.21010
- 13. Andriyanto, O. D., Darni, D., Utami, R. R., Ulfatin, N., Bagus, A., Tuwoso, T., & Rochmawati, R. (2023). Revitalising Local Language Curriculum and Its Implementation. *Advances in Social Science, Education and Humanities Research*, 1497–1504. doi: 10.2991/978-2-38476-008-4\_161
- 14. Sumarni, W., Sudarmin, S., Sumarti, S. S., & Kadarwati, S. (2021). Indigenous knowledge of Indonesian traditional medicines in science teaching and learning using a science–technology– engineering–mathematics (STEM) approach. *Cultural Studies of Science Education*, 17(2), 467– 510. doi: 10.1007/s11422-021-10067-3
- 15. Kabanda, M. N. (2021). Globalisation and curriculum in the 21st Century: A Case for Flexible and Dynamic Curriculum. *Asian Journal of Interdisciplinary Research*, 18–29. doi: 10.34256/ajir2132
- 16. Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2008). Instructional Interventions Affecting Critical Thinking Skills and Dispositions: A Stage 1 Meta-Analysis. *Review of Educational Research*, *78*(4), 1102–1134. doi: 10.3102/0034654308326084
- 17. Mat Dangi, M. R., Mohamed Saat, M., & Saad, S. (2022). Teaching and learning using 21st century educational technology in accounting education: Evidence and conceptualisation of usage behaviour. *Australasian Journal of Educational Technology*, 19–38. doi: 10.14742/ajet.6630
- 18. Fink, A. (2024). Conducting Research Literature Reviews. Los Angeles: SAGE Publications.
- 19. Caulley, D. (2007). Conducting Research Literature Reviews: From the Internet to Paper [Book Review]. *Qualitative Research Journal*, 7(2), 103–104. doi: 10.3316/qrj0702103
- 20. Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative Data Analysis. N. d.: SAGE.
- 21. White, M. D., & Marsh, E. E. (2006). Content Analysis: A Flexible Methodology. *Library Trends*, *55*(1), 22–45. doi: 10.1353/lib.2006.0053
- 22. Abduh, A., & Rosmaladewi, R. (2019). Language policy, identity, and bilingual education in Indonesia: a historical overview. *XLinguae*, *12*(1), 219–227. doi: 10.18355/xl.2019.12.01.17
- 23. Berg, E., & Lepp, M. (2023). The meaning and application of student-centered learning in nursing education: An integrative review of the literature. *Nurse Education in Practice*, 69, 103622. doi: 10.1016/j.nepr.2023.103622

- 24. Tang, K. H. D. (2023). Student-centered Approach in Teaching and Learning: What Does It Really Mean? *Acta Pedagogia Asiana*, *2*(2), 72–83. doi: 10.53623/apga.v2i2.218
- 25. Rizaldi, D. R., Nurhayati, E., & Fatimah, Z. (2020). The Correlation of Digital Literation and STEM Integration to Improve Indonesian Students' Skills in 21st Century. *International Journal of Asian Education, 1*(2), 73–80. doi: 10.46966/ijae.v1i2.36
- 26. Widayana, G. (2023). The influence of technical skills and 21st century skills on the job readiness of vocational students. *Proceedings of the 5th International Conference on Vocational Education and Technology, IConVET 2022, 6 October 2022, Singaraja, Bali, Indonesia.* doi: 10.4108/eai.6-10-2022.2327433
- 27. Kodrat, D. (2021). Industrial Mindset of Education in Merdeka Belajar Kampus Merdeka (MBKM) Policy [Industrial Mindset of Education in Merdeka Belajar Kampus Merdeka (MBKM) Policy]. *Jurnal Kajian Peradaban Islam, 4*(1), 9–14. doi: 10.47076/jkpis.v4i1.60 (in Indonesian).
- 28. Prakoso, B. H., Ramdani, Z., & Rahmah, B. (2021). Teacher's Perception on Merdeka Belajar Policy. *Indonesian Journal of Educational Assessment*, *3*(2). doi: 10.26499/ijea.v3i2.84
- 29. Kamran Akhtar Siddiqui, Shahid Hussain Mughal, Imran Ali Soomro, & Masood Ahmed Dool. (2021). Teacher Training in Pakistan: Overview of Challenges and their Suggested Solutions. *IJORER : International Journal of Recent Educational Research, 2*(2), 215–223. doi: 10.46245/ijorer.v2i2.91
- Bovill, C., Bulley, C. J., & Morss, K. (2011). Engaging and empowering first-year students through curriculum design: perspectives from the literature. *Teaching in Higher Education*, 16(2), 197– 209. doi: 10.1080/13562517.2010.515024
- 31. Taylor, M. W. (2013). Replacing the 'teacher-proof' curriculum with the 'curriculum-proof' teacher: Toward more effective interactions with mathematics textbooks. *Journal of Curriculum Studies*, 45(3), 295–321. doi: 10.1080/00220272.2012.710253
- 32. Hidayat, S. E., Samidi, S., & Nasution, A. (2021). The Alignment And Misalignment Of The Islamic Economics Curriculum With The Indonesian Government Policy. *Share: Jurnal Ekonomi Dan Keuangan Islam, 10*(1), 61. doi: 10.22373/share.v10i1.9394
- 33. Khaeroni, K., & Sabri, S. (2022). Implementation of Independent Learning-Independent Campus at the Department Level of Islamic Religious Higher Education. *Tarbawi: Jurnal Keilmuan Manajemen Pendidikan*, 8(02), 213–226. doi: 10.32678/tarbawi.v8i02.6864
- 34. Aliyyah, R. R., Rasmitadila, Gunadi, G., Sutisnawati, A., & Febriantina, S. (2023). Perceptions of elementary school teachers towards the implementation of the independent curriculum during the COVID-19 pandemic. *Journal of Education and E-Learning Research*, 10(2), 154–164. doi: 10.20448/jeelr.v10i2.4490
- 35. Ward, H., & Hockey, J. (2007). Engaging the learner: Embedding information literacy skills into a biotechnology degree. Biochemistry and Molecular Biology Education, 35(5), 374–380. doi: 10.1002/bmb.79
- 36. Salakhova, V. B., Erofeeva, M. A., Pronina, E. V., Belyakova, N. V., Zaitseva, N., & Ishmuradova, I. I. (2021). State regulation and development of digital educational platforms. *World Journal on Educational Technology: Current Issues*, 13(4), 956–966. doi: 10.18844/wjet.v13i4.6282
- 37. Raffo, C. (2009). Interrogating poverty, social exclusion and New Labour's programme of priority educational policies in England. *Critical Studies in Education*, *50*(1), 65–78. doi: 10.1080/17508480802526660
- 38. Diyasa, I. G. S. M., Putra, I. N. D. P., Mandenni, N. M. I. M., Mahendra A, M. R., & A, R. L. (2023). Implementation of Innovation in Integrated Evaluation and Learning System using Outcome-Based Education Ecosystem. IJEBD (International Journal of Entrepreneurship and Business Development), 6(1), 78–83. doi: 10.29138/ijebd.v6i1.2079

- 39. Syeed, M. M., Shihavuddin, A., Uddin, M. F., Hasan, M., & Khan, R. H. (2022). Outcome Based Education (OBE): Defining the Process and Practice for Engineering Education. *IEEE Access*, 10, 119170–119192. doi: 10.1109/access.2022.3219477
- 40. Norawati, R., & Puspitasari, Y. (2022). The Learning Skills of English as a Foreign Language (EFL) Student-Teachers in Project-based Learning and Case-based Learning. *JEELS (Journal of English Education and Linguistics Studies)*, 9(2), 255–277. doi: 10.30762/jeels.v9i2.512
- 41. Novita, M., Kusumaningsih, W., Setia Wardana, Y., Kumar Behera, S., M., & Iskandar, F. (2022). Advancing Indonesian Education through the Three Penggerak Programs. *KnE Social Sciences*. doi: 10.18502/kss.v7i19.12462
- 42. Ehren, M., & Baxter, J. (2020). *Trust, Accountability and Capacity in Education System Reform* (M. Ehren & J. Baxter, Eds.). Routledge. doi: 10.4324/9780429344855
- 43. Little, A. W. (2010). International and comparative education: what's in a name? *Compare: A Journal of Comparative and International Education, 40*(6), 845–852. doi: 10.1080/03057925.2010.523264
- 44. Alashwal, M. (2020). Design Thinking in STEM Education: A Review. *International Research in Higher Education*, *5*(1), 18. doi: 10.5430/irhe.v5n1p18
- 45. Althubaiti, A., Tirksstani, J. M., Alsehaibany, A. A., Aljedani, R. S., Mutairii, A. M., & Alghamdi, N. A. (2022). Digital transformation in medical education: Factors that influence readiness. *Health Informatics Journal*, *28*(1), 146045822210755. doi: 10.1177/14604582221075554
- 46. Lungu, G. F. (1985). Elites, Incrementalism and Educational Policy-making in Post-independence Zambia. *Comparative Education*, *21*(3), 287–296. doi: 10.1080/0305006850210306
- 47. Reimers, F. M. (2020). Thinking Multidimensionally About Ambitious Educational Change. *Audacious Education Purposes*, 1–46. doi: 10.1007/978-3-030-41882-3\_1
- 48. Yuan, H., Kunaviktikul, W., Klunklin, A., & Williams, B. A. (2008). Improvement of nursing students' critical thinking skills through problem-based learning in the People's Republic of China: A quasi-experimental study. *Nursing & Health Sciences*, 10(1), 70–76. doi: 10.1111/j.1442-2018.2007.00373.x
- 49. Zeng, F. (2019). The Cultivation of Student's Critical Thinking Skills Based on English Reading Contest: A Case Study. *Proceedings of the 2019 5th International Conference on Social Science and Higher Education (ICSSHE 2019)*. doi: 10.2991/icsshe-19.2019.250
- 50. Stedman, N., & Brown, A. (2020). Critical thinking perspectives of undergraduate students: How they think about climate change impacts on global food security and hunger. *Advancements in Agricultural Development*, *1*(1), 14–24. doi: 10.37433/aad.v1i1.29
- 51. de Boer, A., Pijl, S. J., & Minnaert, A. (2011). Regular primary schoolteachers' attitudes towards inclusive education: a review of the literature. *International Journal of Inclusive Education*, 15(3), 331–353. doi: 10.1080/13603110903030089
- 52. Kioupi, V., & Voulvoulis, N. (2019). Education for Sustainable Development: A Systemic Framework for Connecting the SDGs to Educational Outcomes. *Sustainability*, 11(21), 6104. doi: 10.3390/su11216104
- 53. Jarvis, J., & Mthiyane, N. (2022). Using empathetic-reflective-dialogical re-storying as a teachinglearning strategy to confront xenophobic attitudes in a context of higher education. *Journal of Education, 88*, 1–20. doi: 10.17159/2520-9868/i88a07
- 54. Medina-García, M., Doña-Toledo, L., & Higueras-Rodríguez, L. (2020). Equal Opportunities in an Inclusive and Sustainable Education System: An Explanatory Model. *Sustainability*, *12*(11), 4626. doi: 10.3390/su12114626

- 55. Galkiene, A. (2021). Values Supporting The Sustainability Of Inclusive Education In Different Practices. *Society. Integration. Education. Proceedings of the International Scientific Conference, 2,* 192–202. doi: 10.17770/sie2021vol2.6422
- 56. Pegalajar Palomino, M. (2022). Implications of Mobile Learning for Sustainable Inclusive Education: A Systematic Review. *Electronic Journal of E-Learning*, 20(5), 538–553. doi: 10.34190/ejel.20.5.2612
- 57. Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming. *British Journal of Educational Psychology*, 77(1), 1–24. doi: 10.1348/000709906x156881
- 58. Muktiyo, W. (2016). Marketing Strategy and the Potency of Inclusive Education Throughout Surakarta Ex-Residency. *Komunitas*, 8(1), 13–21. doi: 10.15294/komunitas.v8i1.5211