



## Policy Reflection: Kurikulum Merdeka as Educational Innovation in the Era of Society 5.0

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**Abstract:** This study delves into the Merdeka Curriculum as a pivotal educational innovation in Indonesia, aimed at addressing the challenges and harnessing the opportunities presented by Society 5.0. Employing a literature review methodology, this research scrutinizes articles published between 2022 and 2024 to explore the curriculum's concept, implementation, challenges, and opportunities. The findings reveal that the Merdeka Curriculum is a deliberate effort. It aims to improve the quality of human resources by the Indonesian government. It focuses on developing 21st-century skills. These include digital literacy, critical thinking, creativity, and teamwork. It emphasizes a student-centred learning approach, offering flexibility for students to develop their potential based on their interests and talents. However, challenges such as teacher readiness, effective technology utilization, and adequate infrastructure provision are identified. The study underscores the need for collaborative efforts among the government, educational institutions, and the community to ensure the successful implementation of the curriculum. Subsequent studies are recommended to examine the implementation of the Merdeka curriculum at different academic levels and to develop creative learning models that complement its objectives. This study contributes to the discourse on optimizing educational policies to prepare students for the demands of Society 5.0.

**Abstrak:** Penelitian ini mendalami Kurikulum Merdeka sebagai inovasi pendidikan yang sangat penting di Indonesia, yang bertujuan untuk menjawab tantangan dan memanfaatkan peluang yang dihadirkan pada era Society 5.0. Dengan menggunakan metodologi kajian literatur, penelitian ini mengkaji artikel-artikel yang diterbitkan antara tahun 2022 dan 2024 untuk mengeksplorasi konsep, implementasi, tantangan, dan peluang kurikulum tersebut. Temuan ini menunjukkan bahwa Kurikulum Merdeka merupakan inisiatif strategis pemerintah Indonesia untuk meningkatkan kualitas sumber daya manusia, dengan fokus pada pengembangan keterampilan abad ke-21 seperti berpikir kritis, kreativitas, kolaborasi, dan literasi digital. Kurikulum Merdeka menekankan pendekatan pembelajaran yang berpusat pada siswa, menawarkan fleksibilitas bagi siswa untuk mengembangkan potensi mereka berdasarkan minat dan bakat mereka. Namun, tantangan seperti kesiapan guru, pemanfaatan teknologi yang efektif, dan penyediaan infrastruktur yang memadai telah diidentifikasi. Studi ini menggarisbawahi perlunya upaya kolaboratif antara pemerintah, lembaga pendidikan, dan masyarakat untuk memastikan keberhasilan implementasi kurikulum. Penelitian di masa depan direkomendasikan untuk menyelidiki lebih lanjut penerapan Kurikulum Merdeka di berbagai tingkat pendidikan dan mengembangkan model pembelajaran inovatif yang selaras dengan tujuannya. Penelitian ini berkontribusi pada wacana tentang optimalisasi kebijakan pendidikan untuk mempersiapkan siswa menghadapi tuntutan era Society 5.0.

## A. Introduction

The idea behind Society 5.0 is a future in which technology is used to improve societal and individual well-being. This shift towards a human-centred society uses technologies like artificial intelligence, digitalization, and sustainable development to tackle complex challenges and enhance the quality of life (Yadrovskaja et al., 2023). Japan introduced Society 5.0 in response to the Industrial Revolution 4.0. It aims to create a human-focused society using high-tech like AI, IoT, Big Data, and robots (Wang et al., 2022). Society 5.0 is expected to solve social and economic problems, enhance the quality of human life, and drive economic and technical progress within society. This transformation aims to improve many aspects of life, including healthcare, transportation, and urban living, by merging the physical and digital worlds.

The introduction of Society 5.0 has profoundly impacted several aspects of life, including education, which is crucial to the development of societies and the process of their transformation towards a more inclusive and sustainable future (Brudermann et al., 2019). This has increased the importance of education for social development in the era of Society 5.0. The term "Society 5.0" refers to a new era in which artificial intelligence (AI) and other technologies are ubiquitously integrated into many aspects of daily life (Pratama et al., 2022). This integration is leading to several changes in the education landscape, including personalized learning, which allows learning methods to be tailored to the needs, interests and abilities of individual students, and distance learning, which enables more effective and interactive distance learning, making access to education broader and more flexible (Indarta et al., 2022).

Moreover, in the Society 5.0 era, the curriculum has become adaptive, tailored to society and industry needs, emphasizing skills such as problem-solving, creativity, and adaptability. The role of teachers has also evolved, with educators acting more as agents of change, facilitators, and mentors in the learning process rather than simply as sources of knowledge (Nofridasari & Hidayati, 2024; Wigati et al., 2023).

Furthermore, the rapid technological changes of Society 5.0 require individuals to learn throughout their lives to continuously update their knowledge and skills (Khozin et al., 2021). Collaboration with industry is also necessary to ensure that graduates have skills applicable to the world of work in the Society 5.0 era. The impact of education extends beyond personal growth to include societal well-being.

The impact of Society 5.0 on education has led to the introduction of various educational innovations, one of which is the Merdeka Curriculum in Indonesia. The Merdeka curriculum illustrates how education systems adapt to the needs of Society 5.0. It is an attempt by Indonesia to prepare its students for the opportunities and challenges of this new era. The Indonesian Ministry of Education, Culture, Research and Technology (Kemendikbudristek) introduced the Merdeka curriculum as a novel teaching approach 2022. With an emphasis on creating a curriculum that is creative and responsive to students' needs, the Merdeka curriculum is being implemented as part of an attempt to raise the standard of education. This will hopefully lead to more efficient and student-centred

learning (Bawadi et al., 2023; Indarta et al., 2022). Merdeka Curriculum is also considered one of the crucial steps in transforming education in Indonesia (Priantini et al., 2022). With this innovation, a paradigm shift in learning is expected to occur, where teachers are expected to create a pleasant learning environment to encourage creativity, innovation, and student independence. Furthermore, the Merdeka Curriculum is a new approach to raising the standard of education while promoting the growth of outstanding human resources.

The Merdeka curriculum aims to provide an innovative educational program for the rapidly evolving 5.0 society. As artificial intelligence and information technology continue to be significant in modern society, the Merdeka curriculum must adapt to produce highly skilled individuals who can excel in this new era. The Merdeka curriculum focuses on developing essential soft skills such as leadership, integrity, communication, and effective teamwork. It instils values based on the Pancasila Learning Profile and aims to cultivate competitive human resources capable of excelling and providing exceptional services in Society 5.0 (Komalasari & Apriani, 2023; Muarifin, 2022). The knowledge and abilities required to thrive in a technologically advanced society should be emphasized by curriculum designers in the twenty-first century (Mbato, 2019; Shadiev & Wang, 2022). By incorporating the Merdeka curriculum into the demands of Society 5.0, Indonesia's education system can effectively equip students with the necessary skills for prospects and challenges. This will require a comprehensive assessment of the benefits and drawbacks of the Merdeka curriculum about the Society 5.0 era. By recognizing opportunities and overcoming obstacles, implementation will be efficient and adaptable to societal and technological changes (Hadi et al., 2023).

Given the close connection between the needs of Society 5.0 and the Independent Curriculum, policymakers must consider this innovative educational approach. Understanding the opportunities, challenges and developments arising in the digital age and globalization is crucial for the political reflection of the Merdeka curriculum in light of Society 5.0. It is essential to take these changes into account in order to provide students with innovative, relevant and successful learning in a world that is constantly changing (Maulidya & Indriani, 2024). Governments must carefully consider the impact of Society 5.0 on education when designing the Merdeka curriculum to effectively address relevant issues and capitalize on opportunities presented by technological advancements (Triwiyanto et al., 2019). The curriculum can be reviewed, and regular updates as well as investments in teacher preparation programs and educational infrastructure to facilitate the use of technology in the classroom are some examples of how Indonesia is preparing for success in the Age of Society 5.0 and equipping its students with the knowledge and to be successful in a rapidly changing world, we must proactively rethink and adapt our education policies.

In light of the significance of policy reflection in effectively implementing the Merdeka Curriculum during the Society 5.0 era, this study endeavours to thoroughly examine the concept, execution, obstacles, and prospects of this educational advancement. Employing a perspective rooted in Society 5.0, our research aims to contribute to the ongoing discourse on how education systems can strategically equip students for future success.

The primary purpose of this research was to analyze the Merdeka Curriculum as an innovative approach to education, examining its concept and implementation. It also aimed to identify obstacles and potential for success in implementing the curriculum and to make recommendations for policy improvements that can enhance its implementation in the era of Society 5.0. Ultimately, the goal is to optimize the utilization of the Merdeka Curriculum as a tool for educational progress. This study employs a literature review methodology to comprehensively examine the Merdeka Curriculum as an educational innovation in the era of Society 5.0. This approach allows for a thorough analysis of existing research, providing insights into the curriculum's concept, implementation, challenges, and opportunities.

## **B. Method**

The approach used in this study is a literature review. A literature review is an activity focused on a particular topic of study to do an in-depth analysis of the text's content (Bahadoran et al., 2022; Cooper et al., 2018). Since the Merdeka Curriculum was released in 2022 (Wasilah et al., 2023), the literature used in this review will be published in 2022-2024. Various literature from ResearchGate, DOAJ, Google Scholar, and Sinta accredited journal publications are accessible in full text in pdf format. The journals reviewed met the criteria, namely English and Indonesian journal articles on Merdeka Curriculum Implementation in the Age of Society 5.0 (challenges and recommendations). As a result of the search criteria, the total number of articles was 68. This literature review wants to learn about curriculum implementation, Merdeka as an educational innovation in the era of Society 5.0, challenges, recommendations from the 68 articles, identification (in-depth analysis of a topic), data choice, and suitability test will be conducted. Thus, up to 10 articles were identified that were consistent with the objectives of this study. The next step is data analysis. Once the data is sorted, it is analyzed to find theme patterns and draw conclusions about the research topic. When data is analyzed, the analysis is interpreted and structured according to scientific writing.

In summary, this literature review methodology provides a systematic approach to examining the Merdeka Curriculum as an educational innovation in the era of Society 5.0. By carefully selecting and analyzing relevant articles, this study aims to identify key themes, opportunities, challenges, and recommendations related to the curriculum's implementation. The following sections will present the results of this analysis and discuss their implications for policy reflection and educational practice.

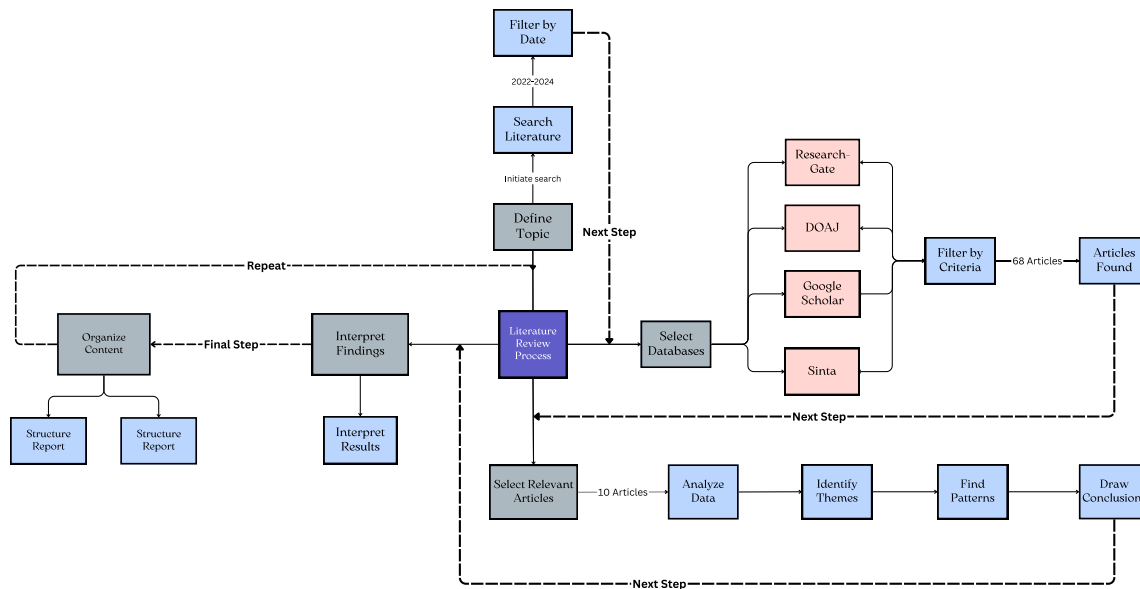


Figure 1. Research Flow

## C. Result and Discussion

### Result

#### Data Analysis

The literature on Kurikulum Merdeka in the context of Society 5.0 was analyzed through a comprehensive review of various research articles. The primary focus was on identifying the curriculum's impact on educational innovation in Indonesia, the opportunities it presents, the challenges it faces, and the necessary adjustments to ensure its success. The literature was sourced from reputable journals and databases, ensuring a wide range of perspectives and insights into the curriculum's implementation and its alignment with the goals of Society 5.0.

#### Critical Appraisal

The selected articles were critically evaluated through a comprehensive analysis of the authors' research methodologies, outcomes, and conclusions. This thorough assessment enabled the identification of the strengths and limitations of current research on Kurikulum Merdeka. It also provided insight into the potential of this curriculum to cultivate vital skills such as critical thinking, creativity, collaboration, and communication among students. These skills are crucial for navigating the complexities and capitalizing on the opportunities presented by our digitally interconnected world in the 21st century. Building upon the insights gained from the critical appraisal, the literature review results reveal several key findings related to the implementation of Kurikulum Merdeka in the era of Society 5.0.

## Literature Review Results

The analysis of relevant literature uncovered several significant discoveries about the execution of Kurikulum Merdeka during the era of Society 5.0:

1. **Educational Innovation:** The implementation of Kurikulum Merdeka marks a notable shift toward a more adaptable and student-focused educational approach. It emphasizes fostering the 4Cs (critical thinking, creativity, collaboration, and communication) and aims to equip students with the skills needed to navigate the demands of the digital era.
2. **Opportunities:** The curriculum provides avenues for enhancing individual skills, incorporating technology in education, and creating novel learning approaches. It urges educators to tailor their teaching styles to cater to students' diverse requirements and prepare them for future societal demands.
3. **Challenges:** The implementation of Kurikulum Merdeka faces several challenges, including limited infrastructure, the need for comprehensive teacher training, and the rapid adaptation required by educators and students to keep pace with technological advancements.
4. **Recommendations:** To successfully address these obstacles, educators must receive substantial support and clear guidance. This should include thorough preparation with sufficient staffing and the incorporation of technological advancements into the educational system. Striking a balance between technological integration and a focus on human-centred teaching methods is crucial for achieving success in the curriculum.

In summary, the literature review reveals that the Merdeka Curriculum represents a significant educational innovation to prepare students for the demands of Society 5.0. While it offers opportunities for developing 21st-century skills, personalized learning, and technological integration, successful implementation requires addressing challenges related to teacher readiness, infrastructure and balancing technology with human-centred approaches. These key takeaways provide a foundation for further discussion on optimizing the curriculum's potential and overcoming obstacles to ensure its effectiveness in the era of Society 5.0.

**Table 2.** Data Analysis Matrix for Literature Review

Author, Title, Journal	Research Method	Results
Ardianti, Y., & Amalia, N. (2022). Kurikulum Merdeka: Pemaknaan Merdeka dalam Perencanaan Pembelajaran di Sekolah Dasar. <i>Jurnal Penelitian dan Pengembangan Pendidikan</i> , 6(3), 399-407. <a href="https://doi.org/10.23887/jppp.v6i3.55749">https://doi.org/10.23887/jppp.v6i3.55749</a>	Phenomenology	Results show that transitioning to new curricula requires significant preparation and training for teachers who are still relying heavily on centrally provided teaching modules. This project aims to develop students' character through project-oriented learning. While the curriculum introduces innovative

Author, Title, Journal	Research Method	Results
		educational concepts, its practical application requires considerable support and clarity for educators.
Bungawati, B. (2022). Peluang dan Tantangan Kurikulum Merdeka Belajar Menuju Era Society 5.0. <i>Jurnal Pendidikan</i> , 31(3), 381-388. <a href="https://doi.org/10.32585/jp.v31i3.2847">https://doi.org/10.32585/jp.v31i3.2847</a>	Literature Review	This curriculum aims to establish a novel educational paradigm where students can enjoy a more flexible, enjoyable, and pressure-free learning environment, encouraging them to focus on developing their talents and interests. Furthermore, there is a recommendation for a transition from traditional classroom settings to more dynamic learning processes, including internships and real-world projects, to equip students better to face global challenges. The paper concludes that while the Independent Learning Curriculum aligns well with the goals of Society 5.0 by promoting human-centric technology use for societal benefit, its successful implementation requires overcoming significant challenges, including the need for comprehensive teacher training and the integration of technology in education.
Fitriana, N., Widarti, H. R., & Agustina, N. I. (2023). Indonesian Education Trends Towards the Era of Society 5.0: Improving the Quality of Human Resources. <i>Education and Human Development Journal</i> , 8(3), 41-51. <a href="https://doi.org/10.33086/ehdj.v8i3.5199">https://doi.org/10.33086/ehdj.v8i3.5199</a>		The results underscore the importance of thorough preparation, encompassing sufficient staffing and incorporating modern educational advancements. Successfully implementing Society 5.0 requires balancing technological advancement with a human-centred focus. This preparation is crucial in addressing the education challenges of today's society. The research highlights the significance of enhancing

Author, Title, Journal	Research Method	Results
		both education standards and human resources in Indonesia, equipping them with the necessary skills and knowledge to thrive in an era where digital and physical realms are seamlessly integrated.
<p>Hadi, A., Marniati, M., Ngindana, R., Kurdi, M. S., Kurdi, M. S., &amp; Fauziah, F. (2023). New Paradigm of Merdeka Belajar Curriculum in Schools. <i>AL-ISHLAH: Jurnal Pendidikan</i>, 15(2), 1497-1510.</p> <p><a href="https://doi.org/10.35445/alishlah.v15i2.3126">https://doi.org/10.35445/alishlah.v15i2.3126</a></p>	<p>Systematic Literature Review (SLR)</p>	<p>This research delves into Indonesia's curriculum shift from 2013 to the Merdeka Belajar curriculum. The transition was driven by several factors, including the need for human resource development, keeping up with changing times, and addressing issues with the previous curriculum. Merdeka Belajar aims to cultivate students' competence and independence by promoting adaptability, depth, and interactivity in learning. However, implementing this curriculum poses challenges, particularly in terms of teachers' proficiency in utilizing technology. With a focus on student-centred learning and equipping students with essential 21st-century skills, the success of this curriculum and its implementation depends on overcoming these obstacles and ensuring proper preparation and support for educators.</p>
<p>Hamdi, S., Triatna, C., &amp; Nurdin, N. (2022). Kurikulum Merdeka dalam Perspektif Pedagogik. <i>SAP (Susunan Artikel Pendidikan)</i>, 7(1), 10-17.</p> <p><a href="https://doi.org/10.30998/sap.v7i1.13015">https://doi.org/10.30998/sap.v7i1.13015</a></p>	<p>Literature Review</p>	<p>The research delineates critical areas that necessitate improvement, including a profound comprehension of constructivist learning theories, the capacity to design and implement efficacious methodologies for the Pancasila student profile project, and the broader</p>

Author, Title, Journal	Research Method	Results
		utilization of formative assessment for the evaluation of student learning outcomes. These competencies are vital for educators to adapt to curriculum modifications that address the challenges of low basic literacy and numeracy skills among students. The curriculum, scheduled for full implementation by 2024, emphasizes a shift from traditional teaching methods to more dynamic and student-centered approaches. This shift will require significant adjustments in teaching practices.
Hasanah, A., & Haryadi, H. (2022). Tinjauan Kurikulum Merdeka Belajar dengan Model Pendidikan Abad 21 dalam Menghadapi Era Society 5.0. <i>GHANCARAN: Jurnal Pendidikan Bahasa Dan Sastra Indonesia</i> , 266–285. <a href="https://doi.org/10.19105/ghancaran.vi.7595">https://doi.org/10.19105/ghancaran.vi.7595</a>	Library Research	The findings show a close connection between these two educational frameworks, which cannot be considered separately. The 21st-century education model serves as a comprehensive framework that directs educational practices, while the "Merdeka Belajar" curriculum provides specific methodologies and approaches for achieving the objectives set by this framework. Both frameworks emerged with the advent of Society 5.0 and the Fourth Industrial Revolution, which brought rapid technological advances and social changes. According to the study, these teaching strategies aim to promote student-centred learning by developing the so-called "4Cs" of critical thinking, creativity, collaboration and communication. These skills are essential for students to be successful in today's highly digitalized and connected world. The "Merdeka Belajar" curriculum greatly

Author, Title, Journal	Research Method	Results
		emphasizes flexibility and creativity in teaching and learning, as these qualities are crucial for student success. This approach allows teachers to cater to the unique needs of their students and equip them with the necessary skills to overcome challenges they may face in their academic journey.
Indarta, Y., Jalinus, N., Waskito, W., Samala, A. D., Riyanda, A. R., & Adi, N. H. (2022). Relevansi Kurikulum Merdeka Belajar dengan Model Pembelajaran Abad 21 dalam Perkembangan Era Society 5.0. <i>EDUKATIF: Jurnal Ilmu Pendidikan</i> , 4(2), 3011-3024. <a href="https://doi.org/10.31004/edukatif.v4i2.2589">https://doi.org/10.31004/edukatif.v4i2.2589</a>	Literature Review	The "Merdeka Belajar" curriculum, a recent initiative by Indonesia's Ministry of Education, Culture, Research, and Technology, is well aligned with the demands of Society 5.0. This alignment is evident in the curriculum's emphasis on fostering critical thinking, creativity, collaboration, and communication skills among students – collectively known as the 4Cs. These skills are essential for navigating the challenges and leveraging the opportunities presented by the digital and highly interconnected world of the 21st century. The curriculum is designed to facilitate innovative and student-centred approaches to learning that are adaptable to the rapid technological advancement characteristic of Society 5.0. This prepares students to enhance their soft skills and adapt to future societal needs.
Nurzen, M. (2022). Teacher Readiness in Implementing the Merdeka Curriculum in Kerinci Regency. <i>Edunesia: Jurnal Ilmiah Pendidikan</i> , 3(3), 313-325. <a href="https://doi.org/10.51276/edu.v3i3.424">https://doi.org/10.51276/edu.v3i3.424</a>	Descriptive Qualitative	The study revealed that teachers at the Sekolah Penggerak (Mobilizing Schools) in Kerinci Regency exhibited high mental readiness to implement the Merdeka Curriculum, encompassing confidence and enthusiasm. The majority

Author, Title, Journal	Research Method	Results
		<p>expressed confidence in addressing challenges and embracing changes, bolstered by prior technical guidance. Nevertheless, some educators expressed concerns regarding potential mistakes or perceived burdens due to their hectic schedules, which may have affected their confidence levels. Teachers were enthusiastic about the curriculum's flexibility in adapting teaching to local contexts. However, introducing increased administrative demands and additional time needed for planning could reduce enthusiasm over time. Despite these challenges, the overall mental readiness of teachers to implement the competency-based and student-centred Merdeka Curriculum was assessed as entirely prepared.</p>
<p>Suhandi, A. M., &amp; Robi'ah, F. (2022). Guru dan Tantangan Kurikulum Baru: Analisis Peran Guru dalam Kebijakan Kurikulum Baru. <i>Jurnal Basicedu</i>, 6(4), 5936-5945. <a href="https://doi.org/10.31004/basicedu.v6i4.3172">https://doi.org/10.31004/basicedu.v6i4.3172</a></p>	<p>Literature Review</p>	<p>Introducing the new curriculum has required teachers to adapt their teaching methods to the evolving standards and demands of education. This change aims to improve education by bringing learning closer to the needs of the modern world and creating a more adaptable and responsive learning environment. The study emphasizes that while the new curriculum poses challenges, it simultaneously provides opportunities for teachers to refine their skills and contribute more effectively to the educational development of their students.</p>

Author, Title, Journal	Research Method	Results
Windayanti, W., Afnanda, M., Agustina, R., Kase, E. B. S., Safar, M., & Mokodenseho, S. (2023). Problematika Guru Dalam Menerapkan Kurikulum Merdeka. <i>Journal on Education</i> , 6(1), 2056–2063. <a href="https://doi.org/10.31004/joe.v6i1.3197">https://doi.org/10.31004/joe.v6i1.3197</a>	Literature Review	It highlights teachers' need to be more creative in designing and executing learning processes to align with the Ministry of Education's guidelines. The research identifies specific issues teachers face, such as difficulties in curriculum analysis, lesson planning, selecting appropriate teaching methods, and integrating technology. However, the study also presents successful examples, including the SMA Negeri 3 Sungai Penuh case, which has adopted the curriculum through project-based learning and comprehensive assessments. The study concludes that while the Independent Curriculum aims to foster a more engaging and effective learning environment, its implementation poses significant challenges for teachers, necessitating further support and training to enhance their capabilities in curriculum delivery.

## Discussion

### 1. Merdeka Belajar Curriculum as a Response to the Demands of the Society 5.0 Era

In the era of Society 5.0, the widespread adoption of technology in daily life requires improving the quality of human resources, especially in the education sector. The human resources needed are individuals who can utilize technology optimally, are highly competitive, and can provide innovative solutions for society.

"The Independent Learning Curriculum is presented as a strategic response to the challenges and opportunities of the Society 5.0 era, aiming to produce individuals who can utilize technology optimally, possess high competitiveness, and contribute innovative solutions for society." (Bungawati, 2022)

Merdeka Belajar Curriculum is a strategic response to the challenges and opportunities in the Society 5.0 era. Through the use of critical thinking, creativity,

teamwork, and communication, learners will develop 21st-century skills—a set of skills necessary to manage complexity in a technology-driven world.

"...the Society 5.0 era, marked by the pervasive integration of technology in daily life, demands a strategic enhancement of educational human resources. It highlights the necessity for educators and students to develop critical thinking, creativity, and technological proficiency..." (Fitriana et al., 2023)

The Merdeka Belajar Curriculum also emphasizes a student-centred learning approach, thus providing flexibility and independence for students to develop their potential according to their interests and talents.

"The "Merdeka Belajar" curriculum and the 21st-century education model are responses to the challenges of the Industrial Revolution 4.0 and Society 5.0. They are interconnected and related, with the "Merdeka Belajar" curriculum designed to achieve the competencies of 21st-century education and to shift the focus of education from teacher-centred to student-centred learning." (Hasanah & Haryadi, 2022)

The Merdeka Belajar curriculum, as interpreted above, represents a strategic initiative undertaken by the Indonesian government to enhance the calibre of human resources to effectively navigate the demands and prospects presented in the epoch of Society 5.0. This educational framework is strategically crafted to cultivate essential 21st-century proficiencies, including critical thinking, creativity, collaboration, and technological adeptness. Moreover, the Merdeka Belajar curriculum underscores a learner-centric pedagogical approach, affording students the latitude and autonomy to harness their capabilities in alignment with their interests and aptitudes. Such an approach resonates with the imperatives of the Society 5.0 era, which accentuates the significance of customization and personalization in the educational milieu. Nonetheless, the execution of the Merdeka Belajar curriculum encounters a myriad of impediments, encompassing educators' receptivity to innovative instructional techniques, the efficacious integration of technology, and the provisioning of requisite infrastructural support.

## **2. Development of 21st century skills in Merdeka Belajar Curriculum**

The Merdeka Belajar Curriculum aims to cultivate 21st-century skills in learners, crucial for addressing the demands and intricacies of the Society 5.0 era. These skills encompass critical thinking, creativity, collaboration, communication, and digital and technological literacy.

"...the Society 5.0 era, marked by the pervasive integration of technology in daily life, demands a strategic enhancement of educational human resources. It highlights the

necessity for educators and students to develop critical thinking, creativity, and technological proficiency..." (Fitriana et al., 2023)

The Merdeka Belajar Curriculum emphasizes a student-centred learning approach, thus providing flexibility and independence for students to develop their potential according to their interests and talents. This is in line with the demands of the Society 5.0 era, which prioritizes individualization and personalization in the learning process.

"The "Merdeka Belajar" curriculum and the 21st-century education model are interconnected and related, with the "Merdeka Belajar" curriculum designed to achieve the competencies of 21st-century education..." (Hasanah & Haryadi, 2022)

In addition, the Merdeka Belajar Curriculum also encourages the development of innovative learning models, such as project-based learning and constructivism approaches, which aim to develop 21st-century skills in students.

"The Independent Curriculum represents the government's effort to improve and equalize education quality in Indonesia. Successful implementation requires teachers to develop specific pedagogical competencies, including a deep understanding of constructivism, project-based learning approaches, and formative assessment techniques." (Hamdi et al., 2022)

The strategic initiative of the Indonesian government aimed at enhancing the quality of human capital, particularly in fostering the 21st-century competencies essential for the Society 5.0 era, is exemplified in the Merdeka Belajar curriculum, as elucidated above. Proficiencies like critical thinking, creativity, collaboration, communication, and digital literacy play a crucial role in addressing the intricacies and challenges of an era characterized by technological dominance. The Merdeka Belajar Curriculum underscores a learner-centric educational approach, granting students the autonomy and adaptability to nurture their capabilities in alignment with their interests and aptitudes. Furthermore, this curriculum advocates for advancing inventive pedagogical frameworks, such as project-based learning and constructivist methodologies, to foster 21st-century skills among students. Nevertheless, the execution of the Merdeka Belajar Curriculum encounters various obstacles, including educators' preparedness to embrace innovative teaching techniques, efficient utilization of technology, and the provision of adequate infrastructural support.

### **3. The Critical Role of Technology in Supporting Individual Learning**

In the era of Society 5.0, technology plays a vital role in supporting individual learning. The Merdeka Belajar Curriculum places technology as one of the main components of student-centred teaching and learning.

"The Independent Learning Curriculum is a strategic response to the challenges and opportunities of the Society 5.0 era, aiming to produce individuals who can utilize technology optimally..." (Bungawati, 2022)

Using technology in learning allows learners to access diverse learning resources, interact with learning content interactively, and facilitate effective collaboration and communication. This aligns with the demands of the Society 5.0 era, which integrates the real and virtual worlds in everyday life.

"...the Society 5.0 era, marked by the pervasive integration of technology in daily life, demands a strategic enhancement of human resources in education." (Fitriana et al., 2023)

Merdeka Belajar Curriculum encourages educators to utilize technology to develop innovative learning models, such as project-based learning and constructivism approaches. This aims to develop 21st-century skills in learners, such as critical thinking, creativity, collaboration, and communication.

"The Independent Curriculum represents the government's effort to improve and equalize education quality in Indonesia. Successful implementation requires teachers to develop specific pedagogical competencies, including a deep understanding of constructivism, project-based learning approaches, and formative assessment techniques." (Hamdi et al., 2022)

Based on the interpretation above, technology is crucial in bolstering individual learning within the Society 5.0 epoch. The Merdeka Belajar Curriculum positions technology as a fundamental element within the student-centred educational paradigm. Leveraging technology for educational purposes enables learners to engage with a wide array of learning materials, interact with educational content in a dynamic manner, and foster efficient collaboration and communication. Such endeavours align with the imperatives of the Society 5.0 era, which melds the tangible realm with the digital sphere in daily life. Furthermore, the Merdeka Belajar Curriculum advocates for educators' integration of technology to craft innovative pedagogical frameworks, including project-based learning and constructivist methodologies. These initiatives seek to cultivate contemporary competencies in students, such as analytical thinking, ingenuity, cooperative skills, and effective communication. Nonetheless, incorporating technology in educational settings encounters various obstacles, such as the preparedness of human capital (educators and students) to wield technology proficiently and the provision of requisite supportive infrastructure.

#### 4. Teacher and Human Resource Readiness Challenges

One of the main challenges in implementing the Merdeka Belajar Curriculum is the readiness of teachers and human resources to face changes and new demands in the learning process. This is highlighted in several literature review results:

"While the curriculum offers significant benefits, including simplicity, independence, and relevance, its implementation is hindered by various challenges, particularly in teacher preparedness and technological competence." (Hadi et al., 2023)

Hadi et al (2023) highlighted that although the Merdeka Belajar Curriculum has advantages, its implementation is hampered by various challenges, especially regarding teacher readiness and technological competence. Teachers are required to develop new skills in using technology and innovative learning methods.

"Another challenge faced is the readiness of human resources in maximizing the use of technology in learning." (Fitriana et al., 2023; Hadi et al., 2023)

One of the challenges faced is the readiness of human resources, both educators and students, to utilize technology optimally in the learning process.

Further emphasizing the challenges teachers face in implementing the Merdeka Curriculum, Windayanti et al (2023) conducted a study highlighting the specific obstacles educators encounter in the classroom setting.

"This research reveals the real challenges faced by teachers in implementing the Merdeka Curriculum at school, especially at SMA Negeri 3 Sungai Penuh." (Windayanti et al., 2023)

Windayanti et al (2023) explicated the authentic obstacles encountered by educators when incorporating the Merdeka Curriculum into educational institutions. These obstacles encompass grasping concepts, acquiring technological proficiency, selecting pedagogical approaches, and accessing educational resources. Analysis: Drawing from the elucidation above, teachers' preparedness and human resources are critical hurdles in implementing the Merdeka Belajar Curriculum. Educators must cultivate novel competencies in utilizing technology and innovative pedagogical strategies like project-based learning and constructivism paradigms. Moreover, the preparedness of human resources also encompasses the capacity of students to effectively harness technology during the learning process. This presents a formidable challenge, given that the Merdeka Belajar Curriculum underscores the extensive utilization of technology to bolster individualized learning. This challenge is further underscored by the discoveries of Windayanti et al (2023), which brought to light the concrete struggles encountered by educators in comprehending the

essence of the Merdeka Curriculum, mastering technology, selecting suitable pedagogical approaches, and the insufficiency of adequate educational materials and references.

To overcome this challenge, collaborative efforts are needed from various related parties, such as the government, educational institutions, and the community. Some steps that can be taken include:

- a. Continuously organize training and mentoring for teachers to improve their understanding and skills in implementing the Merdeka Belajar Curriculum.
- b. Increase investment in education infrastructure, especially internet access and technology tools across Indonesia.
- c. Conduct socialization and education to students and parents about the importance of adaptation to change and the use of technology in learning.
- d. Developing teaching materials and references by the Merdeka Belajar Curriculum, both in printed and digital form and ensuring their availability in all educational units.

## 5. The Need for Collaboration in Education Development

In facing the challenges and opportunities in the era of Society 5.0, collaborative efforts from various related parties are needed to develop quality and relevant education. This is highlighted in several literature reviews:

"Teachers play a vital role in improving education quality in line with national educational goals. However, they face challenges that must be overcome to ensure effective and meaningful learning, ultimately improving the quality of Indonesian education." (Suhandi & Robi'ah, 2022)

Suhandi & Robi'ah (2022) emphasize that teachers play a vital role in improving the quality of education by national education goals. However, they also face challenges that must be overcome to ensure effective and meaningful learning, thus improving the quality of education in Indonesia.

"...the study calls for collaborative efforts from government, educational institutions, and society to develop educational programs that cultivate innovative and adaptable individuals." (Fitriana et al., 2023)

Fitriana et al (2023) called for collaborative efforts from the government, educational institutions, and the community to develop educational programs that can produce innovative and adaptive individuals in facing the challenges of the Society 5.0 era. This is supported by expanding Nurzen's statement that learners must have access to adequate support and resources in order to enable them to select and obtain learning experiences that are both useful and relevant (Nurzen, 2022). This collaboration is essential to ensure the successful implementation of the Merdeka Belajar Curriculum, which is one of the strategic

efforts in preparing qualified human resources who are ready to face challenges in the Society 5.0 era.

Building upon this notion of collaboration, [Ardianti & Amalia \(2022\)](#) conducted a study highlighting the importance of stakeholder involvement in planning and implementing the Merdeka Curriculum at the primary school level.

“A solution to address the challenges that have emerged can be found by emphasizing the importance of learning innovation, enhancing the use of technology, and ensuring that educators are adequately prepared to facilitate online learning” . . . “In this contemporary era, education must also facilitate the acquisition of knowledge and technological skills among students who will eventually become human capital.” ([Ardianti & Amalia, 2022](#)).

Furthermore, the role of technology is paramount for a teacher, given that learning in the 21st century already necessitates robust technology integration and the capacity to master it. [Ardianti & Amalia \(2022\)](#) view this as an opportunity for a teacher to enhance learning innovations that will positively impact future student implementation.

Based on the interpretation above, it is imperative to highlight the necessity of collaboration among various pertinent stakeholders, including governmental bodies, academic establishments, and the general populace, to cultivate high-calibre education that aligns with the requisites of the Society 5.0 epoch. Educators assume a pivotal role in enhancing the standard of education; nevertheless, they encounter obstacles that necessitate concerted endeavours for resolution. This collaborative approach is indispensable to ensure the efficacious execution of the Merdeka Belajar Curriculum, which stands as a pivotal initiative in readying human capital to confront the challenges of the Society 5.0 era. This curriculum accentuates the cultivation of 21st-century competencies, the integration of technology into pedagogy, and an instructional methodology centred around the student. Nonetheless, the realization of the Merdeka Belajar Curriculum is also beset by impediments, such as the preparedness of educators to embrace innovative teaching techniques, the proficient utilization of technology, and the provision of requisite infrastructural support. Therefore, collaborative efforts from various related parties are needed to overcome these challenges. The government plays a role in providing policies and budgets that support educational development and facilitating collaboration between educational institutions and the community. Educational institutions, such as schools and universities, are responsible for implementing relevant curricula and education programs and providing training and mentoring for teachers and other educators. Meanwhile, communities also play an important role in supporting education development, such as providing resources, supporting infrastructure and participating in educational decision-making processes.

In summary, the discussion highlights several crucial aspects of implementing the Merdeka Curriculum in the era of Society 5.0. Technology plays a vital role in enabling

personalized learning, enhancing digital literacy, and preparing students for future demands. However, successfully integrating technology into education requires addressing teacher readiness, infrastructure, and resource allocation challenges. Moreover, the discussion emphasizes the importance of collaboration among stakeholders, including the government, educational institutions, and the community, to ensure the curriculum's success. By fostering partnerships and sharing best practices, educators can effectively navigate the challenges and harness the opportunities presented by the Merdeka Curriculum in the context of Society 5.0.

## D. Conclusion

The Merdeka Curriculum embodies a strategic endeavour undertaken by the Indonesian government to augment human capital in light of the challenges and possibilities brought forth by Society 5.0. This educational program is intricately crafted to cultivate 21st-century proficiencies such as analytical thinking, innovation, cooperation, and digital aptitude, which are indispensable for excelling in a digitally interconnected global context. It underscores a learner-centric instructional methodology, allowing students the autonomy to nurture their capabilities according to their interests and aptitudes. This investigation affirms that the Merdeka Curriculum transcends mere educational revision and instead serves as a transformative approach to preparing Indonesian students for the forthcoming societal and technological terrains.

This study's findings underscore the Merdeka Curriculum's critical role in preparing students for the demands of Society 5.0, highlighting its potential to influence educational practices and outcomes in Indonesia significantly. The successful implementation of this curriculum requires a concerted effort from multiple stakeholders, including policymakers, educators, and the community, to address challenges such as teacher readiness, technological integration, and infrastructural support. These collaborative efforts are essential for realizing the curriculum's full potential in fostering an education system that is innovative, inclusive, and adaptable to the rapid changes characteristic of the 21st century.

Further research is necessary to evaluate the Merdeka Curriculum's effectiveness across different educational levels and regions within Indonesia. Future studies should focus on developing and testing innovative learning models that align with the curriculum's goals and assessing their impact on student outcomes. Additionally, longitudinal research would provide valuable insights into the long-term effects of the curriculum on Indonesia's educational landscape and its ability to prepare students for the complexities of Society 5.0. Such research will contribute to the academic discourse and inform ongoing policy decisions and curriculum adjustments better to meet the evolving needs of students and society.

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