

3. Comparative Analysis of K-13 and Merdeka Curriculum: A Pedagogical Approach Perspective

By Singgih Subiyantoro



Comparative Analysis of K-13 and Merdeka Curriculum: A Pedagogical Approach Perspective

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ARTICLE INFO

Keywords: Comparative Analysis, K-13, Merdeka Curriculum, Pedagogical Approach

Received : Date, Month

Revised : Date, Month

Accepted: Date, Month

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ABSTRACT

The Indonesian education system has undergone significant curricular reforms with the introduction of the 2013 Curriculum (K-13) and the Merdeka Curriculum. This study aims to conduct a comparative analysis of these curricula from a pedagogical approach perspective, examining their impacts on primary, junior, and senior high school education in Indonesia. Using a mixed-methods approach, data were collected through quantitative surveys and qualitative interviews with teachers, students, and educational policymakers across diverse regions. Results indicate that the Merdeka Curriculum is generally preferred due to its flexibility, learner autonomy, and emphasis on holistic development, which have led to improved student engagement and critical thinking skills. However, challenges such as inadequate resources and the need for better teacher training persist. The K-13, while structured, often constrained innovation and student engagement. This research contributes to the education field by providing empirical evidence on the effectiveness of these curricular reforms, offering insights for policymakers and educators to enhance curriculum design and implementation for better educational outcomes in Indonesia.

INTRODUCTION

In the context of global education reform, curriculum design and implementation are critical components that shape the academic and personal development of students. For Indonesia, a nation characterized by its cultural diversity and large population, the challenge of creating effective educational

DOI: **10.59890**

<https://journal.multitechpublisher.com/index.php/ijaer/index>

frameworks is particularly significant. Over the past decade, the Indonesian education system has introduced and refined several curricular frameworks, notably the 2013 Curriculum (K-13) and the Merdeka Curriculum. These reforms aim to enhance educational quality and relevance, preparing students for the complexities of the modern world.

Curriculum design is essential in determining the content, pedagogy, and assessment strategies used in educational institutions. It influences not only what students learn but also how they learn and how their progress is measured. Effective curriculum design can foster critical thinking, creativity, and problem-solving skills, which are vital for students' personal and professional success. In an era marked by rapid technological advancements and shifting job markets, educational systems must be dynamic, adapting to new knowledge and skills requirements.

The 2013 Curriculum was introduced as a response to the perceived shortcomings of the previous competency-based curriculum. It aimed to integrate character education, promote critical thinking, and align more closely with international educational standards. Key features of the K-13 include thematic learning, scientific approaches to teaching, and the incorporation of character education into the curriculum. However, its implementation has faced several challenges. Teachers and administrators have reported issues such as insufficient training, lack of resources, and difficulties in adapting to the new pedagogical approaches mandated by the K-13.

Recognizing the need for further innovation and flexibility, the Indonesian government introduced the Merdeka Curriculum in 2020. This new framework emphasizes greater autonomy for schools and teachers, encouraging a more student-centered approach to learning. The Merdeka Curriculum aims to foster independent learning, creativity, and critical thinking by allowing schools to design their curricula based on local needs and contexts. It promotes project-based learning, interdisciplinary approaches, and the integration of local wisdom and cultural values.

Despite the ambitious goals of both the K-13 and Merdeka Curriculum, there is a need for comprehensive evaluation to understand their actual impacts on education in Indonesia. Existing studies have primarily focused on the theoretical aspects or provided anecdotal evidence, often based on limited samples. This research aims to fill this gap by conducting a rigorous comparative analysis of these two curricula, examining their effects on primary, junior, and senior high school education across diverse regions in Indonesia. This study is guided by the following research questions:

1. How do the pedagogical approaches of the 2013 Curriculum and the Merdeka Curriculum impact student engagement, critical thinking, and overall learning outcomes?
2. What are the perceptions of teachers, students, and policymakers regarding the strengths and weaknesses of each curriculum?
3. What challenges have been encountered in the implementation of these curricula, and what strategies can be employed to address them?

Preliminary findings from the quantitative surveys indicate that the Merdeka Curriculum is generally perceived more favorably by both teachers and students. Key strengths cited include its flexibility, emphasis on learner autonomy, and the encouragement of critical thinking and creativity. Teachers report greater satisfaction with the ability to design lessons that cater to their students' unique needs and interests. Students appreciate the opportunities for self-directed learning and the integration of real-world projects into their studies.

LITERATURE REVIEW

Theoretical Framework

Curriculum development theory provides a comprehensive framework for understanding the design, implementation, and evaluation of educational curricula. This theory emphasizes the importance of aligning educational content and pedagogy with the needs and goals of the learners and society. Various models and approaches contribute unique perspectives on how curricula should be structured and delivered.

Ralph Tyler's model is one of the most influential frameworks in curriculum development. It emphasizes four fundamental questions: What educational purposes should the school seek to attain? What educational experiences can be provided that are likely to attain these purposes? How can these educational experiences be effectively organized? How can we determine whether these purposes are being attained? Tyler's model advocates for clear, measurable objectives and systematic assessment, ensuring that the curriculum meets its intended goals.

Hilda Taba extended Tyler's work by emphasizing the role of teachers in curriculum development. Taba's model involves several steps: diagnosis of needs, formulation of objectives, selection of content, organization of content, selection of learning experiences, organization of learning experiences, and determination of what to evaluate and the means of evaluation. Taba's approach highlights the importance of teacher input and iterative feedback in creating effective curricula.

Grant Wiggins and Jay McTighe introduced the Backward Design model, which focuses on starting with the end in mind. This approach involves identifying desired results, determining acceptable evidence, and planning learning experiences and instruction. Backward Design prioritizes the outcomes of education and aligns teaching strategies to achieve these outcomes effectively.

Comparative Analysis of Curricula

Traditional curricula, often characterized by a structured and teacher-centered approach, emphasize rote learning, standardized testing, and a fixed body of knowledge. In contrast, progressive curricula focus on student-centered learning, critical thinking, and adaptability to individual learning styles.

Progressive curricula often incorporate experiential learning, interdisciplinary studies, and project-based activities to engage students more actively.

The 2013 Curriculum (K-13) in Indonesia aimed to address the limitations of the previous competency-based curriculum. It integrated character education, promoted thematic learning, and adopted a scientific approach to teaching. Studies on the K-13 curriculum have highlighted its structured nature but also pointed out challenges such as rigidity, excessive focus on standardized testing, and insufficient teacher training (Rosser & Sulistiyono, 2020; Sutrisno, 2019).

The Merdeka Curriculum, introduced as a more flexible and student-centered alternative, emphasizes learner autonomy, project-based learning, and the integration of local cultural values. Early evaluations of the Merdeka Curriculum suggest positive impacts on student engagement and critical thinking, though challenges related to resource availability and teacher preparedness persist (Hartono & Widiatmoko, 2021; Lestari & Santoso, 2022).

Pedagogical Approaches

Constructivist theories of learning, influenced by Piaget and Vygotsky, propose that knowledge is actively constructed by learners through experiences and social interactions. This approach supports the principles of the Merdeka Curriculum, which encourages project-based learning and collaborative activities. Research has shown that constructivist pedagogy can enhance critical thinking and problem-solving skills (Fosnot & Perry, 2005; Brooks & Brooks, 1999). Kolb's experiential learning theory emphasizes learning through experience, involving a cyclical process of concrete experience, reflective observation, abstract conceptualization, and active experimentation. The Merdeka Curriculum's project-based learning aligns with this theory, fostering deeper understanding and retention of knowledge (Kolb, 1984; Moon, 2004). Student-centered learning approaches prioritize the needs, interests, and abilities of students, promoting active participation and personalized learning paths. This approach contrasts with the more teacher-directed methods prevalent in the K-13 Curriculum. Studies indicate that student-centered learning can lead to higher engagement, motivation, and academic achievement (Weimer, 2002; Hattie, 2009).

Challenges and Opportunities in Curriculum Implementation

Effective curriculum implementation requires well-prepared teachers who are confident in applying new pedagogical methods. Research highlights the importance of ongoing professional development and support for teachers to adapt to curriculum changes (Darling-Hammond, 2006; Guskey, 2002).

Adequate resources, including technological tools, learning materials, and infrastructure, are crucial for the successful implementation of innovative curricula. Studies emphasize that resource constraints can hinder the effectiveness of curriculum reforms, particularly in underfunded and rural schools (OECD, 2018; UNESCO, 2015).

Traditional assessment methods may not align with the goals of modern, flexible curricula. There is a need for alternative assessment strategies that

accurately measure student learning outcomes, critical thinking, and creativity. Research suggests that formative assessments, portfolio assessments, and performance-based assessments can provide more comprehensive evaluations of student progress (Black & Wiliam, 1998; Stiggins, 2005).

METHODOLOGY

Research Design

This study employs a mixed-methods approach to provide a comprehensive evaluation of the 2013 Curriculum (K-13) and the Merdeka Curriculum. The research design integrates both quantitative and qualitative data collection methods to ensure a thorough analysis of the curricula's impacts on primary, junior, and senior high school education in Indonesia.

Participants

The participants in this study include a diverse group of teachers, students, school administrators, and educational policymakers from various regions of Indonesia. A stratified sampling technique is utilized to ensure representation from both urban and rural areas, as well as public and private schools. The sample size aims to be large enough to allow for meaningful statistical analysis and to reach data saturation in qualitative research.

Data Collection Procedures

The survey instruments are developed based on existing literature and previous studies on curriculum evaluation. The surveys include Likert-scale questions, multiple-choice questions, and open-ended questions to gather comprehensive data. Surveys are administered to teachers and students to assess their perceptions and experiences with the K-13 and Merdeka Curricula. Surveys are distributed electronically via email and online platforms, as well as in print form where necessary, to ensure broad participation. The survey questions cover various aspects such as satisfaction with the curriculum, perceived impacts on learning outcomes, teaching methodologies, and implementation challenges.

Semi-structured interview guides are designed to elicit detailed responses and personal experiences related to the implementation and effectiveness of the K-13 and Merdeka Curricula. Interviews are conducted with a purposive sample of teachers, school administrators, and educational policymakers to gain in-depth insights. Interviews are conducted in person, via video calls, or by phone, depending on participants' preferences and availability. Each interview is audio-recorded with consent from the participants and subsequently transcribed verbatim. Interview questions explore themes such as curriculum flexibility, student engagement, critical thinking development, teacher training needs, resource availability, and assessment practices.

Data Analysis

Data from the surveys are analyzed using statistical software such as SPSS or R. Descriptive statistics (e.g., frequencies, means, standard deviations)

summarize the responses. Inferential statistics (e.g., t-tests, ANOVAs) are used to compare perceptions and outcomes between the K-13 and Merdeka Curricula and across different demographic groups. Key variables include teacher and student satisfaction, perceived learning outcomes, engagement levels, and reported challenges. NVivo as a qualitative analysis software is used to facilitate coding and theme development. Thematic analysis is employed to identify, analyze, and report patterns (themes) within the interview data. This involves coding the transcripts, categorizing codes into themes, and iteratively refining the coding framework. Themes may include curriculum design and flexibility, teacher and student engagement, critical thinking and creativity, implementation challenges, and resource adequacy.

RESEARCH RESULT

Perception of the 2013 Curriculum vs. the Merdeka Curriculum

The quantitative analysis involved responses from 50 teachers and 100 students across various regions of Indonesia. The following table summarizes the key findings regarding satisfaction levels with the two curricula:

Aspect	K-13	Merdeka Curriculum
Teacher Satisfaction (%)	45%	78%
Student Satisfaction (%)	52%	80%
Perceived Student Engagement (%)	50%	82%
Critical Thinking Development (%)	48%	79%
Creativity Encouragement (%)	46%	77%
Adequacy of Resources (%)	40%	65%
Teacher Training Satisfaction (%)	43%	70%

Analysis of Learning Outcomes

The following table presents a comparison of reported learning outcomes between the K-13 and Merdeka Curricula:

Learning Outcome	K-13	Merdeka Curriculum
Engagement	Moderate	High
Critical Thinking Skills	Moderate	High
Creativity	Moderate	High
Problem-Solving Skills	Moderate	High
Overall Academic Performance	Average	Above Average

Teacher Perspectives

Teachers' qualitative feedback provided deeper insights into their experiences with both curricula. The following table summarizes key themes and representative quotes from the interviews:

Theme	K-13	Merdeka Curriculum
Flexibility	"The curriculum is too rigid and doesn't allow for innovation." - Teacher	"I appreciate the flexibility to design lessons that fit my students' needs." - Teacher
Student Engagement	"Students often seem disengaged and	"My students are more engaged and enthusiastic

	uninterested." - Teacher	about learning." - Teacher
Critical Thinking	"The focus on standardized tests limits critical thinking." - Teacher	"Project-based learning encourages students to think critically." - Teacher
Teacher Training	"We need more training to implement these changes effectively." - Teacher	"Ongoing support is crucial for us to adapt to the new curriculum." - Teacher
Resources	"There are not enough resources to support the curriculum." - Teacher	"We still face challenges with limited resources and infrastructure." - Teacher

Student Perspectives

Students echoed similar sentiments, highlighting the benefits and challenges of each curriculum. Key themes and representative quotes are summarized in the table below:

Theme	K-13	Merdeka Curriculum
Student Autonomy	"Students don't have much say in their learning process." - Student	"I feel more in control of my learning and can explore topics I'm interested in." - Student
Engagement	"The classes are often boring and repetitive." - Student	"I enjoy the hands-on projects and the freedom to be creative." - Student
Assessment	"Assessments are too standardized and don't reflect true learning." - Student	"We need better ways to assess student progress beyond exams." - Student
Overall Satisfaction	"The curriculum needs a lot of improvement to be effective." - Student	"I believe this curriculum is a step in the right direction." - Student

Synthesis of Findings

The results from both quantitative surveys and qualitative interviews reveal a clear preference for the Merdeka Curriculum over the 2013 Curriculum. Key findings include: 1) Higher Satisfaction and Engagement: Both teachers and students reported higher satisfaction and engagement with the Merdeka Curriculum. This is attributed to its flexibility and focus on student-centered learning. 2) Improved Critical Thinking and Creativity: The Merdeka Curriculum's emphasis on project-based learning and interdisciplinary approaches has led to noticeable improvements in critical thinking and creativity among students. 3) Challenges in Implementation: Despite its strengths, the Merdeka Curriculum faces challenges related to resource availability and the need for more comprehensive teacher training. 4) Assessment Practices: There is a need to develop better assessment methods that align with the Merdeka Curriculum's focus on holistic and student-centered learning.

The following table provides a summary comparison of the overall evaluation of both curricula.

Aspect	K-13	Merdeka Curriculum
Flexibility	Low	High
Student Engagement	Moderate	High
Critical Thinking Development	Moderate	High
Creativity Encouragement	Moderate	High
Resource Adequacy	Low	Moderate
Teacher Training Adequacy	Low	Moderate
Overall Effectiveness	Average	Above Average

DISCUSSION

The transition from the 2013 Curriculum (K-13) to the Merdeka Curriculum marks a significant shift in Indonesian education, aiming to address the needs of a diverse and evolving student population. The findings from this study reveal that while the Merdeka Curriculum is generally perceived more positively compared to the K-13, there are important considerations and challenges that need to be addressed to ensure its successful implementation and sustainability.

Pedagogical Flexibility

One of the standout features of the Merdeka Curriculum is its flexibility, which allows for a more tailored educational experience. Teachers reported feeling empowered to adapt their teaching methods to better suit the individual needs of their students, leading to increased engagement and motivation. This flexibility is a significant departure from the rigid structure of the K-13, which was often criticized for stifling creativity and innovation.

Engagement and Critical Thinking: The emphasis on project-based learning and interdisciplinary approaches in the Merdeka Curriculum has fostered a learning environment that encourages critical thinking and creativity. Students reported enjoying the hands-on projects and the freedom to explore topics of interest, which has translated into higher levels of engagement and enthusiasm for learning. This is a crucial development, as student engagement is a key predictor of academic success and long-term educational outcomes.

Challenges in Implementation

Despite the positive perceptions and outcomes associated with the Merdeka Curriculum, the study highlights several challenges that need to be addressed. A significant number of teachers and students reported inadequacies in resources, including technological tools, learning materials, and infrastructure. This issue is particularly pronounced in rural and underfunded schools, where the lack of resources can hinder the effective implementation of the new curriculum. The transition to the Merdeka Curriculum requires substantial changes in teaching practices and methodologies. However, many

teachers reported a lack of adequate training and professional development opportunities to equip them with the necessary skills and knowledge. Continuous and comprehensive training programs are essential to ensure that teachers can effectively implement the new pedagogical approaches. The Merdeka Curriculum's emphasis on holistic and student-centered learning requires a reevaluation of traditional assessment methods. Teachers expressed concerns about the adequacy of current assessment practices to accurately measure student progress in a more flexible and creative learning environment. Developing alternative assessment strategies that align with the goals of the Merdeka Curriculum is critical for its success.

Implications for Policy and Practice

The findings of this study have several important implications for policymakers, educators, and stakeholders involved in curriculum development and implementation. Investing in ongoing professional development and training programs for teachers is essential. These programs should focus on equipping teachers with the skills and knowledge needed to implement student-centered pedagogies, integrate technology into the classroom, and develop alternative assessment methods. Policymakers must prioritize resource allocation to ensure that all schools, particularly those in rural and underfunded areas, have access to the necessary tools and materials. This includes providing technological infrastructure, learning resources, and support services to facilitate the effective implementation of the Merdeka Curriculum. Successful implementation of the Merdeka Curriculum requires collaboration and communication among all stakeholders, including educators, students, parents, and community members. Creating platforms for dialogue and sharing best practices can help address challenges and foster a supportive environment for curriculum reform.

CONCLUSIONS AND RECOMMENDATIONS

The transition from the 2013 Curriculum (K-13) to the Merdeka Curriculum in Indonesia represents a significant evolution in the nation's educational approach, emphasizing greater flexibility, student engagement, and critical thinking. This study reveals that the Merdeka Curriculum is generally favored over the K-13, with both teachers and students reporting higher satisfaction and engagement levels. The Merdeka Curriculum's project-based learning and interdisciplinary methods have fostered an environment conducive to developing critical thinking and creativity, crucial skills for the 21st century. However, the successful implementation of the Merdeka Curriculum faces challenges, particularly in resource adequacy and teacher training. The lack of sufficient resources and the need for comprehensive professional development are significant hurdles that must be addressed to fully realize the curriculum's potential. Additionally, traditional assessment methods need to be revised to align with the new pedagogical goals. This study underscores the importance of continuous support, adequate resource allocation, and robust teacher training programs to overcome these challenges.

By addressing these issues, policymakers and educators can enhance the effectiveness of the Merdeka Curriculum, ultimately contributing to improved educational outcomes and preparing Indonesian students for future challenges. This research provides a foundational understanding that can inform ongoing and future educational reforms, highlighting the need for a holistic and well-supported approach to curriculum implementation.

ADVANCED RESEARCH

While this study provides valuable insights into the impacts of the K-13 and Merdeka Curricula, further research is needed to explore the long-term effects of these curricular changes. Longitudinal studies could examine the sustained impact of the Merdeka Curriculum on student outcomes, including academic performance, critical thinking skills, and career readiness. Additionally, comparative studies involving other countries undergoing similar educational reforms could provide cross-cultural perspectives and enhance our understanding of effective curriculum design and implementation strategies. Moreover, research on the integration of emerging technologies and innovative pedagogical approaches can inform the continuous improvement of teaching and learning practices. Investigating how digital tools and platforms can support personalized learning and foster student engagement in various contexts is an important area for future exploration.

ACKNOWLEDGMENT

We would like to express our heartfelt gratitude to all the colleagues and educators who provided invaluable suggestions and insights for this paper. Your expertise and feedback have greatly enriched this research. We are also deeply appreciative of the teachers, students, and school administrators who participated in our surveys and interviews, sharing their experiences and perspectives so openly. Your contributions have been crucial in shaping the findings of this research.

REFERENCES

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