



The Role of Innovation Attributes in the Successful Implementation of Merdeka Curriculum: A Literature Study

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Abstract

The Merdeka Curriculum is a national educational innovation in Indonesia that promotes flexibility, contextualization, and student-centered learning. Despite its potential, the implementation of this curriculum faces various challenges, particularly in terms of teacher readiness and their perception of the new policy. This study examines the role of innovation attributes as defined by Everett Rogers' diffusion of innovation theory in influencing the success of the Merdeka Curriculum's adoption. The five attributes analyzed include relative advantage, compatibility, complexity, trialability, and observability. Using a literature review approach, this analysis focuses on scholarly articles and research reports on the implementation of the Merdeka Curriculum in Indonesia published between 2023 and 2025. Findings indicate that relative advantage and compatibility positively contribute to curriculum acceptance, while complexity remains a major obstacle at the practical level. Meanwhile, trialability and observability accelerate adoption at the school level by providing visible and evaluable outcomes. These results have practical implications for policymakers and educational institutions to design more effective implementation strategies, including teacher training and context-based adaptation approaches. By situating the Merdeka Curriculum within the framework of innovation diffusion, this article contributes to a deeper understanding of how policy adoption in education can be better adopted through alignment with innovation attributes.

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INTRODUCTION

Indonesia's education system is currently undergoing a major transformation through the implementation of the Merdeka Curriculum, which is designed to provide flexibility for education units and educators in developing a more relevant, contextual, and learner-centered learning process. This curriculum emphasizes both competency development and character building through differentiated learning and the Pancasila Student Profile Project

(Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2022). As part of this broader educational reform, Islamic education, an integral component of Indonesia's educational landscape, also faces unique challenges in the era of globalization, such as ignorance, moral decline, and the erosion of Muslim identity (Najah & Lindsari, 2022). These challenges underscore the urgency of a holistic transformation that addresses not only technical aspects of learning, but also moral, ethical, and character dimensions,

all of which are in line with the values promoted by the Merdeka Curriculum.

The successful implementation of the Merdeka Curriculum is strongly influenced by the readiness of teachers to accept and implement these changes. However, many teachers still face challenges in understanding the basic principles of the Merdeka Curriculum, such as learning flexibility, developing independent teaching modules, and implementing diagnostic assessments (Heryahya et al., 2022). In addition, limited understanding of learning differentiation and high administrative burden are inhibiting factors in its implementation at the primary school level (Gea et al., 2024).

To understand the success or failure in the adoption of an innovation, Everett M. Rogers' diffusion of innovations theory approach is highly relevant. Rogers (2003) identifies five key attributes of an innovation that influence adoption: relative advantage, compatibility, complexity, trialability, and observability. In the context of the Merdeka Curriculum, these attributes can be used to analyze how teachers interpret and respond to this new curriculum policy.

Several studies in Indonesia have linked these innovation attributes to the dynamics in the field. Differentiated learning as one of the practices in the Merdeka Curriculum is often considered complex by teachers, especially by those who are not familiar with the personalization approach in the learning process (Rahmawati, 2023). The implementation of the Merdeka Curriculum requires a paradigm shift in teacher thinking that is not only technical, but also philosophical, especially in responding to the learning needs of individual students (Saputra et al., 2024).

Given the importance of innovation attributes in influencing adoption decisions, it is necessary to analyze how these attributes are applied in the context

of the Merdeka Curriculum. Relative advantage, compatibility, and complexity have been identified as the most consistent and statistically significant factors affecting innovation adoption (Kapoor et al., 2014). Therefore, a thorough analysis of these innovation attributes within the implementation of the Merdeka Curriculum is essential to ensure its relevance and effectiveness in the Indonesian educational context.

Although several studies have discussed the challenges and opportunities in implementing the Independent Curriculum, most have focused on general policy issues or teacher readiness without explicitly examining the characteristics of innovations that influence implementation. There is no systematic analysis that applies Rogers' diffusion of innovation theory to explore how each attribute may influence the success or failure of curriculum implementation.

This gap limits a deeper understanding of the mechanisms of acceptance of educational innovations in school settings, especially in the Indonesian context. Therefore, this study aims to analyze the role of innovation attributes, relative advantage, compatibility, complexity, trialability, and observability in influencing the implementation of the Independent Curriculum, and identify which attributes are the main drivers or barriers to its implementation in primary and secondary education settings in Indonesia.

RESEARCH METHODS

This study employed a literature review approach to evaluate the contribution of innovation attributes to the successful implementation of the Merdeka Curriculum. The sources analyzed consisted of peer-reviewed journal articles that discuss innovation diffusion within the context of education in Indonesia, particularly in relation to the

Merdeka Curriculum. A total of eight articles were selected based on topic relevance and the publication period between 2023 and 2025 to ensure the inclusion of current and valid data. The literature search was conducted using academic databases such as Google Scholar and Garuda (Garba Rujukan Digital).

The inclusion criteria comprised publications that focused on the Merdeka Curriculum, employed Rogers' diffusion of innovation theory or its attributes, were peer-reviewed, and were available in full text in either Indonesian or English. Exclusion criteria included non-academic sources, studies unrelated to curriculum or educational innovation, articles lacking methodological clarity or empirical data, and inaccessible publications. The collected data were analyzed using a descriptive qualitative approach through content analysis and thematic synthesis to

identify patterns and major themes within the reviewed literature.

RESULTS AND DISCUSSION

Following the analysis of eight selected articles based on predefined inclusion criteria, key findings emerged that reflect the role of various innovation attributes in the implementation of the Merdeka Curriculum. Each publication was examined to determine its alignment with the five attributes outlined in Rogers' diffusion of innovation theory.

To illustrate the distribution of innovation attributes within the reviewed literature, the following visual summary presents the frequency of each attribute's appearance. This visualization offers an initial overview of the dominant themes, which are further elaborated through the synthesis table and subsequent discussion.

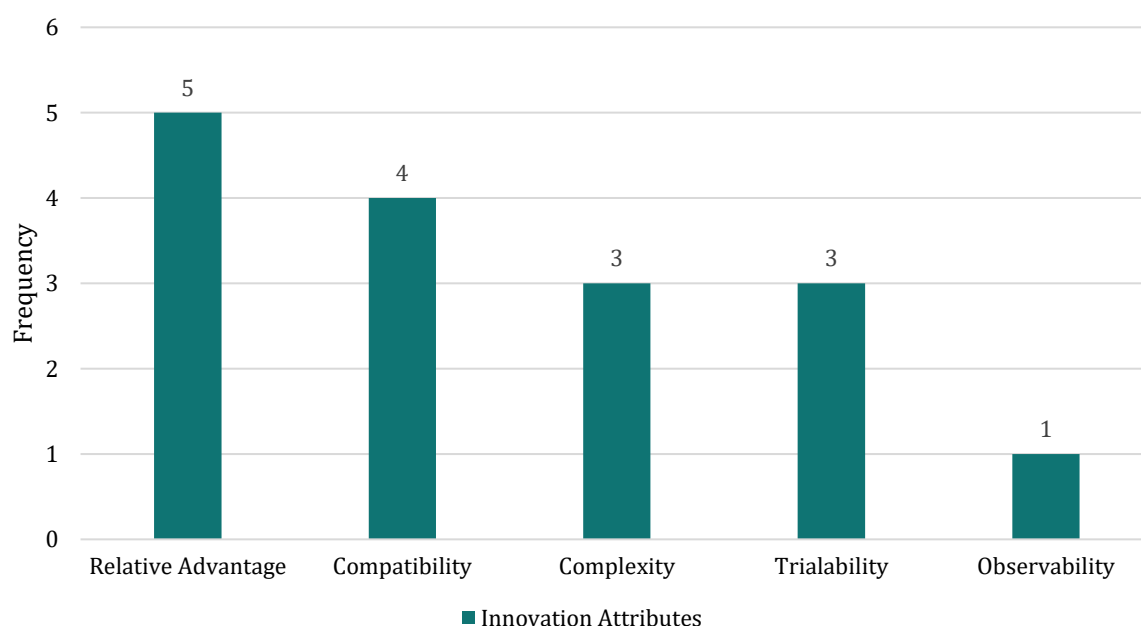


Figure 1. Frequency Distribution of Innovation Attributes in Reviewed Studies

To provide a more comprehensive understanding of how innovation attributes relate to the implementation of the Merdeka Curriculum, the following table synthesizes key information from

the selected studies. It includes the year of publication, journal title, relevant innovation attributes, and the main findings, offering insights into how each attribute is reflected in practice.

Table 1. Summary of Studies on Innovation Attributes in Merdeka Curriculum Implementation

No.	Author & Year	Journal Title	Innovation Attributes Discussed	Key Findings
1.	Supianto et al. (2024)	Exploring Teacher Acceptance of The Merdeka Curriculum in Indonesia: A Diffusion of Innovation Analysis	Relative advantage, Compatibility	Teachers are more likely to accept the Merdeka Curriculum when they perceive its advantages over the previous curriculum and when it aligns with their values and educational needs.
2.	Nurazizah & Supriyadi (2024)	Inovasi Penerapan Kurikulum Merdeka untuk Meningkatkan Kreativitas Siswa di Pkbn Bina Cipta Ujungberung	Relative advantage, Trialability	The Merdeka Curriculum increases creativity and innovation among students, more easily accepted through trials.
3.	Pixyoriza et al. (2023)	Analisis Penelitian Difusi Inovasi Kurikulum Merdeka di Tingkat Sekolah Dasar	Compatibility, Trialability, Observability	Adoption of Merdeka Curriculum is faster in primary schools, especially in projects based on Pancasila learner profiles.
4.	Salsabila et al. (2024)	Implementasi Kurikulum Merdeka di Sekolah Dasar: Keunggulan dan Tantangan	Relative Advantage, Complexity	Teachers experience challenges in designing and implementing learning according to Merdeka Curriculum principles; training and systemic support are needed.
5.	Nurhayati & Prihatini (2023)	Inovasi Kurikulum dalam Kurikulum Merdeka	Relative Advantage, Compatibility, Trialability	The Merdeka Curriculum provides clear benefits in improving the quality of education in the digital era.
6.	Kurniati et al. (2022)	Model Proses Inovasi Kurikulum Merdeka Implikasinya bagi Siswa dan Guru Abad 21	Relative Advantage, Compatibility	The implementation of Merdeka Curriculum focuses on developing 21st century skills for students.
7.	Khusni & Susanti (2024)	Difusi dan Inovasi dalam Pembelajaran pada Sekolah Menengah	Complexity	Policy support and school-level training are important to accelerate innovation adoption, helping teachers deal with implementation complexities.

No.	Author & Year	Journal Title	Innovation Attributes Discussed	Key Findings
8.	Verona et al. (2023)	Penerapan Teori Difusi Inovasi pada Perkembangan Kurikulum Pendidikan di Indonesia	Complexity	Effective communication of innovations and policy support accelerated the adoption of Merdeka Curriculum resistance and lack of teacher training were major barriers.

Based on the literature review, the five attributes of innovation according to Rogers' diffusion theory, (2003), namely relative advantage, compatibility, complexity, trialability, and observability, show different contributions in supporting or hindering the successful implementation of the Merdeka Curriculum in various educational units.

Relative Advantage

The attribute of relative advantage refers to the perception that an innovation is considered better than before. The Merdeka curriculum offers flexibility and relevance to the local context, which allows teachers to adapt learning to better suit student needs (Nurazizah & Supriyadi, 2024; Salsabila et al., 2024). Teachers tend to accept the implementation of the Merdeka Curriculum because it is perceived to offer greater benefits than the previous curriculum, particularly in terms of the autonomy to select and develop teaching materials according to students' needs (Supianto et al., 2024).

Compatibility

Compatibility concerns how much the innovation matches the needs, values, and context of the user. The Merdeka curriculum is particularly suitable for implementation at the primary school level as it supports the formation of the Pancasila learner profile through real experience-based projects (Pixyoriza et al., 2023). This curriculum also supports the development of 21st century skills,

such as critical thinking and collaboration (Kurniati et al., 2022), and is relevant to the challenges of the digital era (Nurhayati & Prihatini, 2023). The compatibility of the Merdeka Curriculum with local contexts and students' needs is a crucial factor in encouraging its acceptance and implementation by teachers, especially when the innovation aligns with the values and practices already established in the school environment (Supianto et al., 2024).

Complexity

Complexity is one of the main challenges in implementing the Merdeka Curriculum. Some teachers experience challenges in designing and implementing independent learning and formative assessment (Salsabila et al., 2024). The complexity of adjusting learning methods and administrative burdens are also obstacles in primary schools (Salsabila et al., 2024). Internal policy support at the school level is essential to ensure that the adoption of innovations is not merely administrative, but also has a substantive impact (Khusni & Susanti, 2024). In addition, effective communication of innovations and stakeholder engagement are important aspects in accelerating the adoption process, in addition to constraints such as teacher resistance and lack of training (Verona et al., 2023).

Trialability

The trialability attribute describes the extent to which innovations can be tested on a limited basis before being

implemented more widely. The Merdeka Curriculum trial was able to increase student creativity and strengthen teacher acceptance (Nurazizah & Supriyadi, 2024). Project activities and the development of teaching modules make curriculum implementation easier, and schools that have conducted pilots are able to adopt the Merdeka Curriculum more quickly due to directly observable and evaluable outcomes (Nurhayati & Prihatini, 2023; Pixyoriza et al., 2023).

Observability

Observability refers to the extent to which the results of an innovation can be directly observed. The success of projects based on the Pancasila learner profile shows the impact on students' character development. The concrete benefits of Merdeka Curriculum in improving the quality of learning drive its level of acceptance among teachers. The 21st century skills developed through the curriculum become an indicator of success that can be observed by educators and other stakeholders Pixyoriza et al. (2023).

The literature review indicates that the successful implementation of the Merdeka Curriculum is closely tied to the five innovation attributes identified by Everett Rogers: relative advantage, compatibility, complexity, trialability, and observability. These factors significantly influence the adoption of innovations at the school level. To ensure effective implementation, it is essential for the government and other stakeholders to focus on these attributes when formulating curriculum-related policies and strategies. Improvements in learning quality, driven by these attributes, increase teacher acceptance, while the development of 21st-century skills serves as an observable indicator of success for both educators and stakeholders (Pixyoriza et al., 2023).

CONCLUSIONS AND SUGGESTIONS

Conclusion

The successful implementation of the Merdeka Curriculum is significantly influenced by the perceived innovation attributes among educators. Relative advantage, compatibility with educational needs, and manageable complexity are central to its acceptance. Therefore, the diffusion of innovation in educational settings must be informed not only by policy formulation but also by empirical realities encountered by educators.

Findings from this literature review emphasize the importance of well-designed policies that consider various aspects of adopting educational innovations. Successful implementation depends not only on infrastructure readiness but also on continuous teacher training, organizational support, and clear communication of the innovation's benefits.

Suggestions

It is recommended that policymakers and education stakeholders focus on improving teacher training, simplifying curriculum procedures, and increasing trial opportunities to reduce adoption barriers. Future research should involve field-based empirical studies to validate these findings across diverse school settings.

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