Merdeka curriculum implementation barriers: a case study at SMK Wikarya Karanganyar

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Abstrak

Kurikulum Merdeka dirancang untuk memberikan pembelajaran fleksibel dan berpusat pada siswa, namun dalam penerapannya masih ditemui berbagai hambatan di sekolah sehingga diperlukan kajian mendalam mengenai tantangan serta strategi implementasinya. Penelitian ini bertujuan untuk mengetahui bentuk kesulitan yang dialami guru di SMK Wikarya Karanganyar dan strategi yang digunakan guru untuk mengatasi kesulitan dalam implementasi Kurikulum Merdeka Belajar di SMK Wikarya Karanganyar. Penelitian ini menggunakan metode kualitatif dengan pendekatan studi kasus. Sumber data penelitian ini meliputi informan, observasi dan analisis dokumen. Teknik pengambilan sampel dilakukan dengan purposive sampling. Pengumpulan data dilakukan dengan wawancara, observasi, dan analisis dokumen. Teknik uji validitas data menggunakan triangulasi sumber dan teknik. Teknik analisis data menggunakan model interaktif. Hasil penelitian menunjukan bahwa bentuk kesulitan yang dialami guru di SMK Wikarya Karanganyar dalam menerapkan Kurikulum Merdeka Belajar yaitu kurangnya pemahaman terhadap kurikulum, kesiapan siswa yang belum optimal, keterbatasan sarana dan prasarana, perbedaan karakter dan kemampuan siswa, serta kesulitan dalam penyusunan administrasi pembelajaran. Strateginya antara lain penyesuaian metode mengajar dengan kondisi kelas, kolaborasi dengan sesama guru, pemanfaatan teknologi dan sumber belajar alternatif, asesmen berkelanjutan dan refleksi diri, serta dukungan pelatihan dari pihak sekolah.

Kata kunci: asesmen; strategi pembelajaran; tantangan guru

Abstract

The Merdeka Curriculum was designed to provide flexible, student-centered learning; however, its implementation in schools continues to encounter various challenges, necessitating comprehensive examination of both obstacles and implementation strategies. This study investigated the difficulties experienced by teachers at SMK Wikarya Karanganyar and the strategies they employed to overcome barriers in implementing the Merdeka Curriculum. Using a qualitative case study approach, data were collected through interviews with 22 participants (1 principal, 1 vice principal for curriculum affairs, 5 department heads, and 15 teachers), classroom observations,

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and document analysis. Participants were selected through purposive sampling. Data validity was ensured through source and technique triangulation, while analysis employed an interactive model. Findings revealed five primary challenges: limited curriculum understanding, insufficient student readiness, inadequate facilities and infrastructure, diverse student characteristics and abilities, and difficulties in preparing instructional administration. Teachers employed several strategies to address these challenges: adapting teaching methods to classroom conditions, collaborating with colleagues, utilizing technology and alternative learning resources, conducting continuous assessments and self-reflection, and participating in school-supported training programs. These findings contribute to theoretical understanding of curriculum implementation challenges and provide practical implications for professional development, infrastructure support, and policy development in vocational education settings.

Keywords: assessment; learning strategy; teacher challenges

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Introduction

Education represents a critical factor in determining human resource quality and national development. Within education systems, curriculum serves as an educational framework encompassing learning objectives and instructional activities implemented in schools (Purba et al., 2021). Indonesian curricula undergo planned updates aligned with technological and societal advancement (Fitriyah & Wardani, 2022).

The Merdeka Curriculum represents an instructional design providing opportunities for students to learn in relaxed, comfortable, enjoyable, and pressure-free environments (Yuniar & Umami, 2023). The curriculum was designed with greater simplicity and flexibility to help teachers focus on essential content while encouraging students to become more active according to their interests and talents (Sasmita & Darmansyah, 2022). The success of the Merdeka Curriculum depends on readiness across all school personnel, from teachers to principals. Teacher readiness in implementing the Merdeka Curriculum constitutes an integral factor as a key implementation component (Suhantyo et al., 2023).

Curriculum development clearly impacts teachers' instructional processes, as teachers must create enjoyable learning experiences enabling students to understand material accurately and effectively. However, not all teachers successfully achieve this goal; many encounter obstacles in current curriculum development. Based on preliminary observations, the researchers found that the majority of teachers experienced significant difficulties implementing the Merdeka Curriculum in their teaching processes. These difficulties generally occurred in planning, implementation, and evaluation aspects. These initial findings indicate a gap between expectations for Merdeka Curriculum implementation and the reality teachers face in practice.

Curriculum implementation is strongly influenced by teachers' management capabilities. When a curriculum lacks support due to limited teacher competencies, it cannot function effectively as an educational instrument. Therefore, teacher involvement in curriculum practice is essential, as teachers represent the primary element determining student learning quality. Teacher professional competence is necessary to facilitate independent student learning and develop multiple intelligences (Kompetensi Guru dan Kurikulum Merdeka Belajar, 2023). This demonstrates that teachers play central roles in curriculum implementation, making teacher readiness an integral factor influencing Merdeka Curriculum success (Suhantyo et al., 2023).

From a curriculum implementation theory perspective, Fullan (2007) emphasized that implementation success is influenced by interactions among three main components: curriculum innovation characteristics, teacher capacity as implementers, and educational environment support. This theory aligns with Ornstein and Hunkins' (2018) perspective, which asserts that curriculum implementation involves not merely applying documents but also transforming teaching practices influenced by teacher competencies, attitudes, and involvement. Consequently, limitations in understanding, readiness, and facility support directly impact implementation quality.

Several previous studies reinforce the existence of Merdeka Curriculum implementation barriers. Dewi et al. (2024) demonstrated that teachers faced challenges in learning planning, implementation, and evaluation aspects, including limited curriculum understanding, insufficient learning resources, and minimal infrastructure. Windayanti et al. (2023) confirmed that teacher problems included difficulties analyzing Learning Outcomes (CP), formulating Learning Objectives (TP), developing Learning Objective Pathways (ATP) and teaching modules, and limitations in using technology and instructional media. Furthermore, Rosjanah and Kiptiyah (2024) found weaknesses in the planning phase, where teachers did not consistently create teaching modules and diagnostic assessments. Teachers also had not fully implemented project-based learning, while the main barrier remained teachers' low readiness in skills and competencies.

Observations revealed that teachers tended to encounter obstacles in three main aspects: learning planning, where teaching module content often did not align with classroom implementation; implementation, where teachers struggled to adapt teaching strategies to diverse student characteristics and facility limitations such as projectors and computers; and evaluation, which remained limited to end-of-chapter tests without consistent use of diagnostic or formative assessments. Additionally, researchers obtained direct testimonies from teachers acknowledging difficulties adjusting to new curriculum demands. Notably, SMK Wikarya Karanganyar possesses unique characteristics as a vocational school with heterogeneous student backgrounds in both academic ability and socioeconomic status. The school also serves as a School Field Introduction (PLP) implementation site, providing opportunities to examine Merdeka Curriculum implementation more closely in real contexts. The combination of new curriculum implementation, facility limitations, and complex student needs makes this school both relevant and strategic for investigation.

Based on this background, the researchers conducted this study titled: "Analysis of Barriers to Implementing the Merdeka Curriculum (Case Study of Teachers at SMK Wikarya Karanganyar)." This research aimed to identify the forms of difficulties experienced by teachers at SMK Wikarya Karanganyar in implementing the Merdeka Curriculum and to examine strategies teachers employed to overcome difficulties in Merdeka Curriculum implementation at SMK Wikarya Karanganyar.

Research Methods

This study employed a qualitative descriptive method with a single case study approach, conducted at SMK Wikarya Karanganyar, located on Jalan Ngalian, Jungke, Karanganyar District, Karanganyar Regency, Central Java. The school was selected because it had implemented the Merdeka Curriculum and served as the researchers' School Field Introduction (PLP) implementation site. Data collection occurred from October 2024 to July 2025.

The research focused on one location: SMK Wikarya Karanganyar. This case study aimed to understand teachers' barriers and strategies in implementing the Merdeka Curriculum. The research proposition underlying this study was that teachers faced barriers in learning planning, implementation, and evaluation while simultaneously developing specific strategies to overcome these barriers. The units of analysis were the experiences of teachers, the principal, the vice principal for curriculum affairs, and department heads in the Merdeka Curriculum implementation process at SMK Wikarya Karanganyar.

Research data included all information obtained from informants serving as respondents, as well as information found in various documents, both statistical and other forms, used for research purposes. Primary data included information from interviews and observations conducted by researchers. Secondary data comprised survey or observation results, teaching modules, and

curriculum documents. Primary data sources were obtained through interviews with teachers, department heads, the vice principal for curriculum affairs, and the principal. Secondary data sources were obtained through teaching modules used by teachers and curriculum documents from the vice principal for curriculum affairs and the administrative office at SMK Wikarya Karanganyar.

Sampling employed purposive sampling, aimed at selecting informants with qualifications and relevant experience to answer formulated research questions. Participants involved in this research comprised four categories: the principal, vice principal for curriculum affairs, department heads, and teachers at SMK Wikarya Karanganyar. The principal served as key informant 1 due to policy-making roles, the vice principal for curriculum affairs as key informant 2 due to responsibility for technical curriculum implementation, department heads as key informant 3 as departmental representatives, and teachers as key informant 4 due to direct involvement in learning processes.

Overall, 22 informants were interviewed, comprising 1 principal, 1 vice principal for curriculum affairs, 5 department heads, and 15 teachers. This number was established to ensure all key actors in curriculum implementation were represented and to ensure varied perspectives. Teacher selection considered specific criteria such as teaching experience length, understanding of the Merdeka Curriculum, and involvement in teaching module development and learning implementation. The number 22 was considered adequate because obtained data reached saturation—the condition when information emerging in interviews became repetitive and added no new findings. Thus, purposive sampling in this research provided in-depth, relevant, and representative data according to research focus.

Data collection employed interviews, observations, and document analysis. Interviews in qualitative research enable researchers to investigate information in depth from respondents. In this study, semi-structured interviews were conducted with teachers involved in Merdeka Curriculum implementation. Observations enabled researchers to directly observe learning processes occurring in classrooms. In this study, researchers conducted participatory observation, where researchers not only observed but also participated in learning activities. Document analysis involved researchers collecting documents related to Merdeka Curriculum implementation, including teaching modules used by teachers and curriculum documents, which were then analyzed.

Data validity employed source and technique triangulation. Source triangulation was conducted to test data reliability by comparing and verifying collected information from different sources. In this context, source triangulation was applied to collect similar data from multiple sources, including teachers, department heads, the vice principal handling curriculum, and the principal of SMK Wikarya Karanganyar. Technique triangulation was implemented to test data reliability by re-verifying information from similar sources using different methods. For example, if data were obtained from observation, those data were confirmed through interviews and documentation.

Data analysis employed an interactive model: data collection, data reduction, data presentation, and conclusion drawing. Data collection was conducted through observation, interviews, and document analysis. Data reduction was defined as the stage of selecting collected data. Data presentation was conducted to facilitate data viewing and understanding. Conclusion drawing represented the final stage in data analysis. The research procedure in this study followed preparation, data collection, data analysis, and report writing conducted by researchers.

Results and Discussion

Research Results

Teachers' difficulties in implementing the Merdeka Curriculum stem from limited understanding of the curriculum's basic concepts and implementation. Many teachers, especially recent graduates, lack adequate preparation regarding the Merdeka Curriculum because they did not fully study this material during their university education. Additionally, some teachers believe that curricula do not differ significantly, hindering adaptation to new approaches. Differences in technology use capabilities also present distinct problems, although technology integration

constitutes an important part of Merdeka Curriculum implementation. Teachers also tend to use teaching modules without adjusting them to class characteristics, and learning processes remain unidirectional without encouraging active student participation.

Other challenges emerge from differences in student character and abilities. Not all students possess readiness for independent learning or can recognize their own interests and potential. Some students even misinterpret "merdeka" (independent) as unlimited freedom rather than responsible freedom. Dependence on teachers remains very high. Student activities in learning tend to be passive, and they are not yet accustomed to participating in project-based learning. Consequently, implementation of gradual and reflective learning strategies has not been optimally demonstrated, either in practice or in learning documents.

Facility and infrastructure factors also influence curriculum implementation success. Limitations in learning aids such as LCD projectors, computers, internet access, and practice rooms restrict teachers' scope in implementing contextual and innovative learning. As a private school, SMK Wikarya Karanganyar faces budgetary challenges, resulting in uneven facility provision. This condition causes teachers to rely more heavily on conventional methods and has not fully integrated technology into teaching and learning processes.

The Merdeka Curriculum requires teachers to conduct differentiated learning—adjusting approaches to individual student needs, interests, and abilities. However, in implementation, this strategy still encounters obstacles. Large student numbers, limited time, and uneven teacher readiness represent primary causes. Teachers still employ uniform methods for entire classes, while teaching tools do not fully support diverse learning practices according to student needs.

Additionally, administrative burden presents distinct challenges. Teachers must compile various documents such as Learning Objective Pathways (ATP), Learning Outcomes (CP), teaching modules, and formative and summative assessments. These requirements demand considerable time and energy, while teachers must also focus on classroom teaching and learning processes. Consequently, some teachers only complete learning documents as formalities without truly adjusting them to actual field conditions.

To address these various challenges, teachers at SMK Wikarya Karanganyar attempt to adjust learning methods to actual classroom conditions. The approaches employed are not fixed to single models but remain flexible according to learning situations and student characteristics. Teachers combine methods such as lectures, discussions, direct practice, and question-and-answer sessions to deliver material more effectively. Nevertheless, in learning documents, written strategies often remain general and have not been specifically adjusted to student characteristics.

Collaborative approaches are also implemented as efforts to strengthen teachers' understanding of the Merdeka Curriculum. Teachers share experiences through informal discussion forums, learning communities, and internal workshop activities. Through this collaboration, they jointly develop teaching tools and seek solutions to obstacles faced in classrooms. Schools also facilitate by providing time and space for collaborative activities, although implementation still requires more systematic organization.

Technology use and alternative learning resources are also maximally utilized by teachers. With existing facility limitations, teachers take initiative to use personal devices such as laptops or phones to support learning activities. Online learning resources, instructional videos, and digital libraries are utilized to supplement materials not yet available in physical form. This strategy not only supports learning processes but also encourages students to become more independent in seeking information.

As part of continuous evaluation, teachers implement formative assessment routinely and conduct self-reflection on learning processes. Teachers monitor student development not only from

final grades but also from activities, involvement, and participation in learning processes. Assessment results are used to improve teaching approaches and serve as bases for designing subsequent learning. Feedback to students is also provided directly so they understand the learning processes they undergo.

Efforts to increase understanding of the Merdeka Curriculum are also conducted through training and guidance. Teachers participate in socialization and technical guidance organized by education offices or other partner institutions. At the school level, training remains limited and has not reached all teachers, but these activities constitute important initial steps for increasing readiness in implementing the curriculum. With continuous and systematic training support, teachers are expected to implement the Merdeka Curriculum more effectively and contextually.

Discussion

The Merdeka Curriculum at SMK Wikarya Karanganyar faces various challenges, one being teachers' limited curriculum understanding. Many teachers experience difficulties understanding the Merdeka Curriculum's basic concepts and philosophy, especially regarding teaching module development, learning outcomes (CP), and assessment. This results from minimal technical training received and different approaches compared to previous curricula. Teachers unaccustomed to curriculum flexibility and autonomy feel confused in independently developing teaching tools. According to Sumarmi (2023), these difficulties include CP analysis, ATP development, and learning strategy determination. Additionally, Sasmita and Darmansyah (2022) added that facility limitations and teachers' ability to adapt to technology also contribute to low understanding of the new curriculum. These difficulties demonstrate that teachers have not fully understood comprehensive curriculum structure, which is crucial for adjusting learning outcomes to classroom conditions.

Student readiness also constitutes an important factor in Merdeka Curriculum implementation success. Although this curriculum emphasizes active student roles, many students at SMK Wikarya Karanganyar still demonstrate high teacher dependence and are not yet accustomed to learning independence. Suherman (2023) stated that the Merdeka Curriculum aims to create enjoyable and deep learning; however, students unaccustomed to independent learning will struggle to follow this system. Asiah and Nurenik (2024) added that students require gradual guidance to adapt to more flexible and challenging learning demands.

Facility and infrastructure limitations constitute primary barriers in Merdeka Curriculum implementation at SMK Wikarya Karanganyar. Facilities such as computers, internet, and presentation equipment are not evenly available across all classrooms. Teachers experience difficulties implementing project-based learning due to insufficient supporting tools and media for interactive and contextual learning activities. This aligns with Asiah and Nurenik's (2024) opinion that the availability of space for teacher and student creativity in learning processes is strongly influenced by adequate facility availability. Complete facilities enable teachers to implement innovative methods and help students become more active in learning processes.

Differences in student character and abilities also present challenges in Merdeka Curriculum implementation. Although this curriculum was designed to develop independent, creative, and reflective learners, many students at SMK Wikarya Karanganyar still demonstrate passive attitudes. Kemendikbudristek (2022) explained that the Merdeka Curriculum was designed to develop independent, creative, and reflective learners. However, this has not been fully achieved because many students are not yet accustomed to activity-based learning systems relying on independence and personal responsibility. Rosjanah and Kiptiyah (2024) stated that student characteristics lacking

independence and minimal habituation to active learning models constitute barriers in implementing learning strategies according to the Merdeka Curriculum. Thus, students' lack of psychological and cognitive readiness becomes an obstacle requiring resolution in Merdeka Curriculum implementation.

In the Merdeka Curriculum, teachers must compile various learning documents such as ATP, CP, teaching modules, and learning evaluations. Unfortunately, this administrative burden often consumes teachers' time and reduces their focus on classroom learning processes. Teachers feel that administrative demands are not proportional to available time and support. Sumarmi (2023) explained that teachers face high workloads because they must complete many administrative documents alongside teaching duties. This results in some teachers only completing documents as formalities without considering substance and relationships with learning needs. Tyack and Cuban (2020) mentioned that curriculum changes often create administrative pressure making teachers difficult to adapt optimally. Collaboration and systematic support are necessary to reduce this burden and ensure teachers focus on learning substance.

Teachers adjust teaching methods to classroom situations. Teachers do not rely on single approaches but use variations such as lectures, discussions, practice, and question-and-answer sessions, depending on student readiness and enthusiasm that day. Hennilawati et al. (2023) stated that relevant learning methods in the Merdeka Curriculum include Problem-Based Learning, experiments, peer teaching, and contextual learning enabling students to actively think critically and skillfully solve problems. This demonstrates that teachers must be able to read classroom situations and adjust approaches used to match student dynamics. Sibagariang et al. (2021) also stated that contextual learning approaches enable students to understand material more meaningfully because they align with their experiences. By considering various learning styles and student backgrounds, teachers can create more effective and inclusive learning experiences.

Teachers conduct collaboration in the form of learning communities or informal discussions with colleagues. Through these activities, teachers share best practices, jointly develop teaching tools, and discuss solutions to classroom learning obstacles. Tyack and Cuban (2020) explained that curriculum changes often encounter resistance, and teacher collaboration constitutes an important step in overcoming these barriers. With the presence of experience-sharing spaces and professional cooperation, teachers can jointly understand and implement curriculum changes effectively.

To overcome physical facility limitations such as books and learning equipment, teachers utilize technology such as the internet, personal laptops, and digital learning platforms to support learning processes. Teachers also encourage students to independently use libraries and online learning resources. Direktorat Jenderal Guru dan Tenaga Kependidikan (2023) emphasized the importance of developing innovative and contextual learning strategies, including technology utilization as part of digital transformation in education. By utilizing technology and alternative learning resources, teachers not only adapt to limitations but also foster student independence in seeking and processing information.

Teachers conduct formative assessment routinely through assignments, exercises, and observation of student activities. Additionally, teachers reflect on learning processes to improve teaching approaches and methods used. Muttaqin et al. (2024) explained that assessment in the Merdeka Curriculum is categorized into diagnostic, formative, and summative assessment, each aiming to understand student conditions before, during, and after learning. Through these assessments and reflection, teachers can identify weaknesses and successes in learning processes and immediately make necessary adjustments.

Teachers also participate in training from both education offices and schools. This training helps teachers understand Merdeka Curriculum structure, teaching tool development, and

appropriate learning approaches. Direktorat Jenderal Guru dan Tenaga Kependidikan (2023) emphasized that teacher training and professional development must be adjusted to Merdeka Curriculum principles to support contextual and innovative learning. With training, teachers are better prepared to understand new curriculum structure and can develop teaching tools appropriate to student characteristics and school conditions.

Conclusion

Based on study results, the implementation of the Merdeka Curriculum at SMK Wikarya Karanganyar faces various forms of difficulties experienced by teachers in the implementation process: limited curriculum understanding, suboptimal student readiness, facility and infrastructure limitations, diverse student characteristics and abilities, and difficulties in learning administration preparation. Strategies teachers employ to overcome difficulties include adapting teaching methods to classroom conditions, collaborating with fellow teachers, utilizing technology and alternative learning resources, conducting continuous assessment and self-reflection, and obtaining support and training from schools. Theoretically, these findings strengthen Mulyasa's (2021) perspective on curriculum functions, align with Tyack and Cuban's (2020) views regarding resistance in curriculum change, and support Kemendikbudristek's (2022) concepts regarding teachers' active roles, training, and flexible school policies. Practically, this research implies the need for teacher training programs more relevant to Merdeka Curriculum challenges, increased facility and infrastructure support and continuous mentoring from schools and government, and encouragement for teachers to continuously innovate and collaborate to create more optimal learning aligned with Pancasila Student Profile objectives.

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