



## Analysis of the teacher's difficulties in the preparation of teaching modules Kurikulum Merdeka in elementary school

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### ABSTRACT

The year 2023 is the second year of the implementation of Kurikulum Merdeka, but teachers are still unfamiliar with the curriculum transition. The purpose of this study is to find out which parts of the teacher have difficulty in compiling teaching modules and how efforts to overcome the challenges in compiling teaching modules. The method used is descriptive qualitative. The data source is selected by purposive sampling. The subject of this research is teachers who implement Kurikulum Merdeka, and the object is the teacher's difficulty in preparing the Kurikulum Merdeka teaching module. The data collection technique uses observation, interview, and documentation study methods. The data validity technique uses data and source triangulation techniques. The data analysis technique uses Milles & Huberman's interactive analysis model, which includes the stages of data collection, data reduction, data presentation, and conclusion drawing. This study's results indicate teacher difficulties in preparing teaching modules, namely, analyzing the conditions and needs of students, ATP analysis, determining time allocations, learning models and methods, learning objectives, meaningful understanding, and assessment. Efforts made by teachers in overcoming difficulties, namely, observation, asking about activities and learning that students like, discussing with peers, looking for references on the internet, opening an independent teaching platform, adjusting student needs and predicting the duration of activities, and targeting time for doing assignments.

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### ABSTRAK

Tahun 2023 merupakan tahun kedua diimplementasikannya Kurikulum Merdeka, namun guru masih belum terbiasa dengan adanya peralihan kurikulum tersebut. Tujuan penelitian ini untuk mengetahui pada bagian mana guru kesulitan dalam menyusun modul ajar dan bagaimana upaya untuk mengatasi kesulitan dalam menyusun modul ajar. Metode yang digunakan kualitatif deskriptif, sumber data dipilih secara purposive sampling. Subjek penelitian ini adalah guru yang menerapkan Kurikulum Merdeka, dan objeknya adalah kesulitan guru dalam penyusunan modul ajar Kurikulum Merdeka. Teknik pengumpulan data menggunakan metode observasi, wawancara, dan studi dokumentasi. Teknik keabsahan data menggunakan teknik triangulasi data dan sumber. Teknik analisis data menggunakan model analisis interaktif Milles dan Huberman yang meliputi tahapan pengumpulan data, reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian ini menunjukkan adanya kesulitan guru dalam menyusun modul ajar yakni; menganalisis kondisi dan kebutuhan peserta didik, analisis ATP, menentukan alokasi waktu, model dan metode pembelajaran, tujuan pembelajaran, pemahaman bermakna, asesmen. Upaya yang dilakukan guru dalam mengatasi kesulitan yakni; observasi, menanyakan kegiatan dan pembelajaran yang disukai peserta didik, berdiskusi dengan teman sejawat, mencari referensi di internet, membuka platform merdeka mengajar, menyesuaikan kebutuhan murid dan memprediksi lama durasi kegiatan, menentukan target waktu mengerjakan tugas.

**Kata Kunci:** Kesulitan guru; kurikulum merdeka; modul ajar; sekolah dasar

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## INTRODUCTION

Kurikulum Merdeka represents a newly established national curriculum to be fully implemented as Indonesia's national curriculum by 2024 (Nurwiati, 2022). The year 2023 marks the second year of Kurikulum Merdeka's implementation, currently being applied to grades I, II, IV, and V at the elementary school level. This curriculum features distinct developmental phases for primary education: (1) Phase A comprising grades I and II; (2) Phase B consisting of grades III and IV; and (3) Phase C encompassing grades V and VI (Jannah et al., 2022). Despite completing its first year of implementation, educators continue to face significant challenges in adaptation, remaining in a transitional period from the previous Kurikulum 2013 framework. This curricular transition necessitates substantial adjustments and pedagogical adaptations to ensure effective implementation. (Rahmadhani et al., 2022).

The primary objective of Kurikulum Merdeka is to address learning gaps, as established through the decree of Indonesia's Minister of Education under Kemendikbudristek Regulation No. 56/M/2022. This curriculum prioritizes essential and foundational knowledge appropriate to students' developmental stages (Priantini et al., 2022). Critical knowledge within Kurikulum Merdeka encompasses fundamental competencies that students must master, including literacy and numeracy, technological skills, critical thinking, collaboration abilities, communication, and self-directed learning. The implementation of Kurikulum Merdeka follows a progressive approach, where Kemendikbudristek grants schools autonomy to adapt the curriculum according to their readiness level (Nugraha, 2022). In developing Kurikulum Merdeka's learning frameworks, educators must align them with students' needs, thereby receiving professional discretion to exercise their creativity in instructional design. (Ariga, 2022).

Teaching modules (modul ajar) or learning materials represent systematically designed instructional tools developed based on pedagogical principles to achieve specific competencies or learning objectives (Magdalena et al., 2020). The competency standards within the curriculum constitute a set of abilities, skills, attitudes, and knowledge expected to be mastered by students. These standards significantly influence instructional planning to support effective learning (Nesri & Kristanto, 2020). While teachers are granted autonomy in designing teaching modules, these modules must incorporate essential minimum components, including learning objectives, learning activities, initial and final assessment plans, and the teaching media to be utilized. However, as stipulated by Kemendikbudristek, educators may supplement these requirements with additional components when necessary, such as (1) general information (identification details, prerequisite competencies, Profil Pelajar Pancasila, facilities and infrastructure, target student characteristics, learning models); (2) core components (learning objectives, assessments, meaningful understanding, guiding questions, learning activities, student and teacher reflections); and (3) appendices, containing student worksheets (LKPD), enrichment and remedial materials, reading resources, glossaries, and bibliographies.

The preparation of teaching modules (modul ajar) involves several sequential stages: (1) analysis of student needs and conditions, teacher capabilities, and institutional readiness; (2) diagnostic assessments for teachers to identify students' comprehension levels and learning gaps; (3) identification of the Pelajar Pancasila profile; (4) formulation of learning pathways based on competency achievements; (5) development of assessment instruments; and (6) teacher preparation of modules according to established component requirements (Salsabilla et al., 2023). Teachers play a pivotal role in this module development process, as they are challenged to exercise creativity and critical thinking skills in designing learning materials (Maulinda, 2022). Compared to the previous curriculum's Lesson Implementation Plans (Rencana Pelaksanaan Pembelajaran/RPP), the Kurikulum Merdeka teaching modules demonstrate greater simplicity in their structure (Nuryani et al., 2023). This distinction becomes particularly evident when examining the targeted competencies. At the same time, the Kurikulum 2013 framework established

basic competencies divided into four core areas (spiritual attitudes, social attitudes, knowledge, and skills). Kurikulum Merdeka instead focuses on phase-based learning outcomes.

While teachers are ideally expected to develop teaching modules (modul ajar) optimally, many still face significant challenges in preparing and creating these learning materials, particularly with Kurikulum Merdeka being relatively new. Relevant research by [Zulaiha et al. \(2023\)](#) examined teacher difficulties in implementing Kurikulum Merdeka, with findings indicating specific challenges in developing certain components of the teaching modules. This current study shares similarities with that research investigating the problems teachers face when implementing Kurikulum Merdeka and their coping strategies. However, while their study focused on general curriculum implementation, this research explicitly examines module development. Furthermore, their study involved only grade I and IV teachers. In contrast, this study employs a broader research sample by interviewing twelve teachers across grades I, II, IV, and V, encompassing all class groups (rombel A, B, and C). The research by [Kurnia et al. \(2021\)](#) investigated teacher challenges in developing learning materials (perangkat pembelajaran) at the elementary level, revealing significant difficulties in this preparation process. While the current research shares common ground with Kurnia et al.'s work examining teacher obstacles related to learning material development, crucial distinctions exist in their curricula. The earlier study focused on Kurikulum 2013 implementation, whereas the present research explicitly addresses Kurikulum Merdeka. Furthermore, while they concentrated exclusively on upper-grade teachers, this study encompasses educators who have implemented Kurikulum Merdeka across multiple grade levels, comprising twelve participants teaching grades I, II, IV, and V across all class groupings (rombel A, B, and C).

Implementing this new curriculum requires significant adaptation, presenting considerable difficulties for teachers in developing teaching modules (modul ajar), particularly at SD Muhammadiyah 16 Karangasem. In light of these field-observed challenges, this study aims to identify the specific difficulties encountered by teachers at SD Muhammadiyah 16 Karangasem, especially those teaching grades I, II, IV, and V, when preparing Kurikulum Merdeka's teaching modules. Furthermore, the research examines the strategies these educators employ to overcome the challenges associated with developing learning materials under the new curriculum framework.

## LITERATURE REVIEW

### Kurikulum Merdeka

Kurikulum Merdeka was developed as a curriculum emphasizing diverse intracurricular learning approaches, aiming to optimize the achievement of student competencies ([Fauzi, 2022](#)). This curriculum embodies the "Merdeka Belajar" (Independent Learning) concept, which grants schools the flexibility to creatively innovate and develop autonomous learning practices ([Khosiyatika & Kusumawati, 2023](#)). Kurikulum Merdeka fosters a calm, relaxed, and enjoyable learning environment that nurtures students' talents without undue pressure or stress. Through its implementation, Kurikulum Merdeka is expected to facilitate the optimal attainment of learning objectives while supporting holistic student development ([Khusni et al., 2022](#)).

Kurikulum Merdeka possesses several distinctive characteristics, including a focus on essential subject matter, dedicated additional hours for developing the Profil Pelajar Pancasila (Pancasila Student Profile) character traits, and the provision of flexibility to design, organize, and implement learning activities tailored to students' needs and developmental phases ([Leu, 2022](#)). Introduced as a transformative solution for Indonesia's education system, Kurikulum Merdeka prioritizes cultivating students' abilities and knowledge relevant to their developmental stages, fostering enjoyable, meaningful, and comprehensive learning experiences ([Priantini et al., 2022](#)). In implementing Kurikulum Merdeka, teachers and schools are granted autonomy in determining educational approaches through comprehensive or phased implementation while

adhering to established pedagogical principles (Lestari & Arifin, 2023). The curriculum's operational framework emphasizes differentiated instruction aligned with phased learning outcomes, incorporating authentic assessment methods to evaluate student competency across all developmental domains holistically.

## Teaching Modules and Their Development Process

Teaching modules (module ajar) serve as instructional guides for teachers. They are designed to be engaging, well-structured, and tailored to students' learning needs (Setiawan *et al.*, 2022). These modules are developed by carefully considering specific circumstances and requirements, resulting in targeted and unique learning objectives that maximize the achievement of educational indicators (Maulinda, 2022). Lesson plans are essential for all educators as they provide a structured framework to attain the intended learning outcomes.

The Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) explains that teaching modules (modul ajar) are similar to Lesson Implementation Plans (Rencana Pelaksanaan Pembelajaran/RPP), but with more comprehensive components, making RPP unnecessary when teachers already utilize teaching modules. According to Kemendikbudristek, teaching modules must include the following minimum elements: (1) learning objectives, (2) learning activities, (3) initial and final assessments, and (4) learning media. These four elements are mandatory requirements for every teaching module that teachers or schools develop.

According to Maulinda (2022), there are eight key stages in preparing teaching materials for Kurikulum Merdeka, (1) Analyzing the needs and conditions of students, teachers, and educational institutions, where educators identify learning challenges, requirements, and student circumstances to ensure the designed teaching modules are precisely targeted and accurate; (2) Conducting diagnostic assessments to understand students' learning conditions and needs, which helps identify their competencies, strengths, and weaknesses regarding learning abilities and readiness; (3) Identifying the Profil Pelajar Pancasila (Pancasila Student Profile), a process of determining student needs based on character education aligned with the Profil Pelajar Pancasila; (4) Developing teaching modules by compiling materials based on previously established learning pathways derived from learning outcomes; (5) Teachers prepare assessments (including types, techniques, and instruments) by designing formative and summative evaluations according to the subject matter; (6) Composing the teaching module while adhering to predetermined components; (7) Teachers finalize these components by adapting them to students' teaching and learning needs; and finally (8) Evaluating the teaching modules to reflect on how well their implementation aligns with the original plans.

## Teacher Difficulties

Teachers are professional educators responsible for teaching, educating, and guiding students (Angkur *et al.*, 2022). Difficulties refer to challenging conditions, obstacles, or hardships in professional practice. Teacher difficulties encompass the various challenges, barriers, or problems educators face when carrying out their duties and responsibilities. These difficulties may stem from multiple factors, including teacher professionalism, environmental conditions, or systemic educational issues (Sulton & Maunah, 2022). While teachers play a central role in developing lesson implementation plans (RPP), they frequently encounter challenges during the learning material preparation process due to its complex, multi-step nature. Teachers' obstacles in creating lesson plans often result from an insufficient understanding of the curriculum framework. Given that teachers hold crucial responsibility for determining learning success, it

becomes essential for them to thoroughly comprehend pedagogical principles and establish optimal learning conditions for students (Surya *et al.*, 2016).

## METHODS

This study employs a descriptive qualitative research method. Panjaitan, in his book *Metodologi Penelitian*, explains that qualitative research observes objects in their natural setting without manipulation or hypothesis testing. The study was conducted at SD Muhammadiyah 16 Karangasem in Surakarta City, with data collected from selected informants using purposive sampling. The subjects were teachers of grades I, II, IV, and V from all class groups (rombel A, B, and C) at SD Muhammadiyah 16 Karangasem, while the research object focused on teachers' difficulties in developing teaching modules (modul ajar) aligned with Kurikulum Merdeka. Data collection was carried out through observations of Kurikulum Merdeka implementation at the elementary level, interviews with twelve teachers implementing the curriculum (comprising grade I, II, IV, and V teachers from all three class groups: A, B, and C), and documentation analysis of teaching modules prepared by classroom teachers. The interview phase specifically focused on identifying which aspects of module development posed challenges for teachers and how they addressed these difficulties. Data validity was ensured through data and source triangulation. As Panjaitan explains, triangulation involves verifying information obtained from one source by cross-checking it with data from other sources. For data analysis, this study applied the interactive analysis model developed by Miles and Huberman in 1984, which includes the steps of data collection, data reduction, data presentation, and conclusion drawing, as elaborated by Abdussamad in his book *"Metode Penelitian Kualitatif"*.

## RESULTS AND DISCUSSION

### Results

The data obtained through interviews, observations, and documentation with teachers at SD Muhammadiyah 16 Karangasem specifically addressed two primary research dimensions: (1) the challenges teachers encountered in developing teaching modules (modul ajar) for Kurikulum Merdeka implementation, and (2) the corresponding strategies employed by educators to overcome these module preparation difficulties. The study engaged twelve participating teachers across grades I, II, IV, and V through comprehensive qualitative methods to capture the complexities of curriculum adaptation in classroom practice.

### Teacher Challenges in Developing Kurikulum Merdeka Teaching Modules

Interviewing twelfth-grade I, II, IV, and V teachers from all class groups (rombel A, B, and C) at SD Muhammadiyah 16 Karangasem revealed various difficulties educators encountered in preparing teaching modules (modul ajar). These challenges are systematically analyzed according to the module development stages: (1) analyzing student conditions and needs; (2) examining learning pathway objectives (alur tujuan pembelajaran); (3) determining time allocation; (4) selecting teaching models and methods; (5) establishing learning objectives; (6) identifying meaningful understanding (pemahaman bermakna); and (7) designing assessments. The complete findings of these challenges are presented in Table 1.



**Table 1.** Identified Challenges

No	Teaching Module Development Stages	Identified Challenges
1	Analysis of student conditions and needs	Adapting materials to varying student abilities Incorporating diverse student interests and learning styles into lesson planning
2	Determining Learning Objective Pathways (ATP)	Alignment between learning outcomes and government-issued textbooks
3	Determining time allocation	Coordinating P5 project implementation with other subjects' schedules Discrepancies in time allocation across subjects and failure to meet deadlines
4.	Selecting learning models and methods	Difficulty identifying appropriate learning models/methods for the Indonesian Language subject
5.	Establishing learning objectives	Misalignment between government-mandated learning objectives and departmental textbooks
6.	Developing meaningful understanding	Variations in student comprehension levels
7.	Designing assessments	Technical challenges in data input using IT systems Assessing Profil Pelajar Pancasila achievement

*Source: Research, 2023*

### Individual Teacher Challenges in Module Development

The research findings reveal the specific difficulties encountered by individual teachers at SD Muhammadiyah 16 Karangasem when preparing teaching modules (modul ajar), as comprehensively detailed in **Table 2**.

**Table 2.** Individual Teacher Challenges

No	Stages of Teaching Module Development	Grade											
		1A	1B	1C	2A	2B	2C	4A	4B	4C	5A	5B	5C
1.	Analysis of student conditions and needs				□				□				
2.	Learning Objective Pathway (ATP)							□					
3.	Time allocation					□		□					
4.	Learning models and methods							□		□			
5.	Learning objectives						□			□			
6.	Meaningful understanding								□				
7.	Assessment	□									□		

*Source: Research, 2023*

**Table 2** presents the specific difficulties encountered by individual teachers during the teaching module (modul ajar) preparation process. The research findings demonstrate that each teacher faces unique challenges at different stages of development. In the first stage of analyzing student needs and conditions, two teachers from grades 2A and 4B encountered difficulties. The second stage, analyzing learning pathway objectives, presented challenges for the grade 4A teacher. Two teachers from grade 2B and 4A experienced problems in the third stage of determining time allocation. The fourth stage, selecting teaching

models and methods, proved challenging for two grade 4A and 4C teachers. In the fifth stage of establishing learning objectives, challenges emerged for grade 2C and 4C teachers. The grade 4B teacher faced difficulties in the sixth stage of determining meaningful understanding. Finally, two teachers from grade 1A and 4C encountered obstacles in the seventh assessment design stage.

### Teacher Strategies in Addressing Challenges of Kurikulum Merdeka Teaching Module Development

Based on interviews conducted with twelve teachers across all class groups (rombel) of grades I, II, IV, and V at SD Muhammadiyah 16 Karangasem, various approaches were identified to overcome difficulties encountered in preparing Kurikulum Merdeka teaching modules (module ajar). Table 3 systematically presents the comprehensive strategies educators employ to address these challenges.

**Table 3.** Teacher Strategies

No	Stages of Teaching Module Development	Implementation Strategies
1	Analysis of student conditions and needs	Conducting one-month classroom observations, then prioritizing students' most critical needs Surveying students about preferred learning activities and adapting instruction to match their interests and learning styles
2	Developing Learning Objective Pathways (ATP)	Discussing with same-grade-level colleagues, researching online references, and utilizing the Merdeka Mengajar platform
3	Determining time allocation	Estimating activity durations, setting task completion times based on difficulty levels, and adjusting schedules
4.	Selecting learning models and methods	Engaging in professional peer discussions
5.	Establishing learning objectives	Aligning learning objectives with instructional materials, accessing the Merdeka Mengajar platform, and organizing external expert-led Kurikulum Merdeka training sessions
6.	Developing meaningful understanding	Participating in professional learning communities and utilizing the Merdeka Mengajar platform
7.	Designing assessments	Researching assessment methodologies, collaborating with peers, and incorporating student participation metrics

*Source: Research, 2023*

**Table 3** presents teachers' specific strategies to address difficulties in preparing teaching modules (modul ajar), with solutions corresponding to each stage of module development. During the initial stage of analyzing student needs and conditions, the grade 2A teacher conducted one-month observations while the grade 4B teacher inquired about students' preferred activities. For the second stage involving learning pathway objectives, the grade 4A teacher overcame challenges by consulting colleagues, researching online references, and utilizing the Merdeka Mengajar platform. In the third stage of time allocation determination, the grade 2B teacher estimated durations based on student needs, while the grade 4A teacher adjusted schedules. Regarding the fourth stage of selecting teaching models and methods, grade 4A and 4C teachers engaged in peer discussions. For the fifth stage of establishing learning objectives, the grade 2C teacher aligned objectives with subject matter, whereas the grade 4C teacher consulted the Merdeka Mengajar platform. The grade 4B teacher addressed sixth-stage challenges in determining meaningful understanding (pemahaman bermakna) through colleague consultations and platform resources. Finally, for assessment design (stage seven), grade 1A and 4C teachers gathered assessment information, engaged in self-study, and incorporated student participation metrics.

## Discussion

### Analysis of Student Needs and Conditions

Students' diverse abilities, styles, and interests in one class raise difficulties because teachers must adjust to the diversity of students' ability levels, interests, and learning styles. In line with the principles of the Independent Curriculum, implementing differentiated learning helps teachers deliver material fairly according to the diversity of students. A curriculum that adopts the principle of independence supports students in learning according to their interests and abilities to achieve optimal and meaningful results (Yulianti *et al.*, 2022). Students exhibit varying readiness levels in receiving learning material—some may have no prior knowledge, while others are already proficient (Ngaisah *et al.*, 2023). To ensure that instruction aligns with student needs, teachers conduct diagnostic assessments outlined by Kemendikbudristek. Through this analysis of student needs, teachers can identify strengths and weaknesses, enabling them to classify students according to their requirements.

Several teachers, specifically those teaching classes 2A and 4B, struggled to analyze student needs and conditions. To address these challenges, the teachers implemented strategies such as conducting observations, asking students about their preferred activities and learning methods, and subsequently adapting instruction to align with students' interests and learning styles. As Ngaisah *et al.* (2023) emphasized, teachers can initiate discussions about students' prior knowledge before beginning instruction to understand their learners better. Educators may employ cognitive and non-cognitive diagnostic tests to gain insights into students' backgrounds, emotional states, and overall well-being (Nurcahyono & Putra, 2022). These assessments are also accessible through the PMM application. In his article, Nugraha (2022) explains that the platform features assessment tools designed to assist teachers in efficiently conducting diagnostic evaluations related to students' numeracy and literacy skills.

### Developing the Learning Objective Pathway (Alur Tujuan Pembelajaran/ATP)

Before designing a teaching module, the teacher must establish the Learning Objective Pathway based on the learning outcomes. The teaching module implements the previously designed Learning Objective Pathway (Setiawan *et al.*, 2022). The Learning Objective Pathway is detailed in form as it serves as the foundation for developing lesson plans. The ATPs created by different teachers vary because they are not standardized by the government (Fajri *et al.*, 2023). Educators can develop the Learning Objective Pathway through various methods, starting with formulating learning objectives and organizing them into a learning sequence, then analyzing the elements of learning outcomes to identify competencies at the final stage of each component (Mahmudah, 2023).

The principles of ATP in the “*Panduan Pengembangan Kurikulum Operasional di Satuan Pendidikan*” explain that the development of the Learning Objective Pathway must adhere to essential principles: coherence, continuity, contextual relevance, and simplicity. The function of the Learning Objective Pathway is similar to that of the syllabus in the Kurikulum 2013, serving as a guide for designing instruction. However, it also incorporates learning outcomes and the Proyek Penguatan Profil Pelajar Pancasila. Creating an ATP includes the educational unit, semester, grade level, phase, subject, formulation of learning materials, learning objectives, Profil Pelajar Pancasila, learning models, assessment methods, and learning resources (Riswakhayuningsih, 2022). The Learning Objective Pathway (ATP) is a systematically and logically structured sequence of learning objectives, encompassing all phases of learning outcomes from beginning to end (Manalu *et al.*, 2022). The difficulty in formulating the Learning Objective Pathway (ATP) was experienced by the teacher of grade 4B, prompting efforts to seek references on the internet and explore the platform Merdeka Mengajar. To enhance educators'



competencies in implementing the Kurikulum Merdeka, teachers are supported by the Merdeka Mengajar platform, which can be accessed via web and application interfaces on Android devices, computers, or laptops (Fitriya *et al.*, 2023). The development of this platform, Merdeka Mengajar, is expected to serve as both a medium and a companion for teachers in implementing the Kurikulum Merdeka, fostering enthusiasm for collaboration and knowledge-sharing (Nugraha, 2022).

### **Determining Time Allocation**

To ensure that instruction meets its targets and proceeds systematically, time allocation must be established. Kurnia *et al.* (2021) note that even when educators meticulously plan lessons, actual implementation may not align with the intended time allocation due to time constraints. Variations in students' abilities also lead to differences in the time required to complete learning activities—some students work quickly, while others need more time (Ngaisah *et al.*, 2023). The Kemendikbudristek explains that schools can set their class schedules, provided the annual instructional hour targets are met, even if completed in less than a full year. Schools are granted flexibility in adjusting weekly learning loads throughout the academic year (Qotimah & Rusman, 2023). Implementing P5 projects can be tailored to each school's specific circumstances (Arifah & Utami, 2023).

Several teachers encountered difficulties determining time allocation, specifically the teachers of grade 2B and grade 4A. To address this challenge, they tried to predict activity durations and set task completion times according to the difficulty level. Ngaisah *et al.* (2023) explain that teaching modules can be easily developed if teachers understand students' interests and align each lesson with the designated instructional hours. In his book *"Pembelajaran Paradigma Baru,"* Sufyadi explains that the target duration varies between tasks and is adjusted based on the intended learning exploration objectives.

### **Determining Learning Models and Methods**

Various learning models can be implemented to support the effectiveness of instruction for students with diverse learning styles, enabling them to achieve optimal outcomes. Learning models and methods serve as teachers' strategies to ensure that the material is delivered in a way that students can easily comprehend (Putra *et al.*, 2019). However, teachers encounter challenges, particularly in the Indonesian language. The teaching process in upper-level Indonesian language instruction encompasses writing, listening, reading, and speaking activities. Methods applicable to higher-grade elementary school learning include practice exercises, drills, group work, inquiry-based approaches, problem-solving, and question-and-answer sessions (Safitri *et al.*, 2022). Higher-grade classrooms often adopt problem-based learning approaches (Kurniawan *et al.*, 2022).

To achieve Indonesian language and literature learning objectives, teachers must create effective and efficient learning experiences and ensure quality instruction. Teachers must also understand student characteristics to achieve high-quality learning. Understanding learners' characteristics is crucial in implementing appropriate strategies, models, and methods (Safitri *et al.*, 2022).

### **Establishing Learning Objectives**

Teachers have the autonomy to develop learning materials for the Kurikulum Merdeka. The Kemendikbudristek states that these learning objectives are derived from the learning outcomes specified in Decree of Kemendikbudristek Number 56 of 2022. Learning objectives are formulated to simplify the learning outcomes, ensuring that instruction proceeds as planned (Putri *et al.*, 2022).

Teachers in grade 2C and grade 4C encountered difficulties determining learning objectives. To address this challenge, they utilized the platform Merdeka Mengajar and realigned the learning objectives with the learning materials. The school's efforts to overcome these difficulties included inviting external experts to conduct training sessions and workshops.

### Establishing Meaningful Understanding

Meaningful understanding in the Kurikulum Merdeka is an essential aspect that requires attention. As a crucial component that cannot be overlooked, meaningful understanding refers to a statement describing the relationship between concepts in learning to create comprehensive comprehension (Setiawan *et al.*, 2022). The content of meaningful understanding consists of information that provides practical value for learning in daily life (Rahmadayanti & Hartoyo, 2022). This understanding emerges through interactive learning that fosters feedback between teachers and students via question-and-answer sessions (Fajri *et al.*, 2023).

The teacher of grade 4B encountered difficulties in developing meaningful understanding and addressed this challenge through peer discussions. The Kelompok Kerja Guru (KKG) is a collaborative platform to help teachers overcome challenges in developing teaching modules. The government facilitates the Merdeka Mengajar platform to support Kurikulum Merdeka implementation and address existing difficulties. Consistent with Rohimat & Najarudin (2022), teachers have established learning communities to mutually support one another in implementing Kurikulum Merdeka. Through mentoring and training, whether conducted independently or collectively via Kelompok Kerja Guru (KKG), Musyawarah Guru Mata Pelajaran (MGMP), and other teacher communities, educators share best practices, learning materials, and resources through the Merdeka Mengajar platform (Rahmadayanti & Hartoyo, 2022).

### Developing Assessments

Assessment is an essential component of instructional planning and an evaluation tool. It is crucial for understanding students' capabilities (Nasution, 2022). In their book titled "*Asesmen dan Evaluasi Pembelajaran di Sekolah Dasar*," Indrastoeti and Siti explain that assessments can broadly be categorized into formative and summative assessments. Formative assessment monitors the extent to which instruction aligns with the planned objectives, while summative assessment determines the success or effectiveness of completed instruction. Assessment is a vital part of the learning process, allowing educators to measure student achievement and progress (Budiyanto, 2014). The Kurikulum Merdeka operates in a digital era, requiring teachers to integrate technology into instruction and assessment. However, educators still face challenges in technological implementation. Modern education also demands the development of students' technological literacy, as they will become future human resources (Ardianti & Amalia, 2022). The rapid advancement of technology has made it a fundamental necessity in education (Hanafi & Minsih, 2022).

Teachers in Grade 1A and Grade 4C encountered obstacles in implementing Kurikulum Merdeka assessments, prompting them to seek assessment-related information and references from various sources actively. Husna and Rigiarti (2023) suggest that teachers participate in numerous training sessions and gather additional information to address assessment-related challenges. Various Kurikulum Merdeka training programs can help improve teacher competency. Formative assessment may incorporate self-assessment and peer assessment (Riswakhayuningsih, 2022).

## CONCLUSION

The study reveals that teachers continue to face difficulties in developing several components of teaching modules within the Kurikulum Merdeka framework, including: student needs analysis, learning objective pathway formulation, time allocation determination, selection of learning models and methods, learning objective establishment, meaningful understanding integration, and assessment design. To address these challenges in Kurikulum Merdeka teaching module development, teachers have employed various strategies, including conducting classroom observations, identifying student learning preferences, engaging in professional peer discussions, consulting online references, utilizing the Merdeka Mengajar platform, customizing content to student needs, estimating activity durations, and establishing task completion timelines.

While the government's initiative in developing the Merdeka Mengajar platform has significantly supported Kurikulum Merdeka implementation, we recommend expanding specialized training programs to enhance teacher competencies in differentiated instruction and technological integration. Future research should incorporate larger sample sizes, particularly including remote areas, and investigate the platform's effectiveness for veteran teachers with over 15 years of service.

### **AUTHOR'S NOTE**

The authors hereby declare that no conflicts of interest are associated with this article's publication. The authors affirm that all data and content presented in this article are plagiarism-free and represent original work.

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