

Implementation of The Teaching Tool Feature in Learning Plane Geometry For 2nd Grade at Sekolah Penggerak

Ririk Woro Hapsari, Matsuri, Supianto

Universitas Sebelas Maret
ririkworo@student.uns.ac.id

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Abstract

The Platform merdeka mengajar is one of the tools created by the government to facilitate teachers in understanding and implementing the kurikulum merdeka in the learning process. However, in practice, many schools have not yet utilized the Platform merdeka mengajar appropriately; teachers are not using the platform in either the planning or implementation stages of learning. The Platform merdeka mengajar has a teaching materials feature that teachers can use as a reference when preparing for instruction. This research aims to describe the implementation of the teaching materials feature in learning activities, specifically for the topic of 2D shapes in the second grade. This study employed a case study method with a descriptive qualitative approach. Data were collected through interviews, observation, and documentation. The results of this study indicate that the Platform merdeka mengajar can be implemented in the planning, implementation, and assessment stages of learning. The teaching materials feature provides resources that include CP/ATP, teaching modules, student worksheets, and evaluation instruments. Based on the research conducted, it can be concluded that the Platform merdeka mengajar can assist teachers in implementing the kurikulum merdeka in the teaching and learning process.

Keywords: *Teaching tool feature, Independent Curriculum, Geometry subject*

Abstrak

Platform merdeka mengajar merupakan salah satu sarana yang diciptakan pemerintah untuk memudahkan guru dalam memahami dan menerapkan kurikulum merdeka pada proses pembelajaran. Namun pada kenyataannya masih banyak sekolah yang belum memanfaatkan platform merdeka mengajar dengan tepat, guru belum menggunakan platform merdeka mengajar dalam perencanaan maupun proses pelaksanaan pembelajaran. Platform merdeka memiliki fitur perangkat ajar yang dapat digunakan guru sebagai referensi dalam menyiapkan pembelajaran. Tujuan dari adanya penelitian ini yaitu untuk mendeskripsikan implementasi fitur perangkat ajar pada kegiatan pembelajaran terutama pada materi bangun datar di kelas dua. Metode yang digunakan pada penelitian ini yaitu studi kasus dengan pendekatan deskriptif kualitatif. Data dikumpulkan melalui wawancara, observasi dan dokumentasi. Hasil dari penelitian ini yaitu Platform merdeka mengajar dapat diimplementasikan pada tahap perencanaan, pelaksanaan dan asesmen pembelajaran. Pada fitur perangkat ajar telah tersedia perangkat ajar yang meliputi CP/ATP, modul ajar, lembar kegiatan peserta didik, dan juga instrumen evaluasi bagi peserta didik. Dari penelitian yang telah dilakukan dapat ditarik kesimpulan bahwa Platform merdeka mengajar dapat membantu guru dalam menerapkan kurikulum merdeka pada proses belajar mengajar.

Kata kunci: *Perangkat ajar, PMM, Bangun Datar*



INTRODUCTION

Ideally, the implementation of learning should proceed systematically and achieve predetermined learning objectives. To support the implementation of high-quality instruction, teachers must prepare teaching materials that align with the curriculum and the learning needs of students. In the Kurikulum Merdeka, teaching materials comprise various tools that assist teachers in identifying learning content and reference sources appropriate to student needs and characteristics. Teaching materials serve as a directional guide for instructional activities (Romadhon & Irfan, 2025). The Kurikulum Merdeka grants teachers the freedom to select and utilize teaching materials appropriate to the learning context. This policy provides teachers with the flexibility to use more diverse learning resources, including digital technology (Kurniawan et al., 2024).

In line with technological advancements in education, the government has launched a digital platform that teachers can use as a resource for references when preparing teaching materials in accordance with the demands of the Kurikulum Merdeka. This platform is the Merdeka Mengajar platform, abbreviated as PMM. The Merdeka Mengajar platform is an application containing materials and content that support teachers in implementing the Kurikulum Merdeka during the learning process (Surani et al., 2022). The Merdeka Mengajar platform has various features accessible to teachers. One feature that helps teachers understand and compile teaching materials aligned with the Kurikulum Merdeka is the perangkat ajar feature. The perangkat ajar feature contains references for teaching materials categorized by subject and specific phases to assist the instructional process, including learning resources, teaching modules, and project modules (Aulia et al., 2023). This platform is expected to address the problem of teachers' insufficient understanding of the Kurikulum Merdeka. Initially, the government provided training on the Merdeka Mengajar platform to Sekolah Penggerak and guru penggerak. This training was intended for guru penggerak and Sekolah Penggerak to facilitate dissemination to surrounding schools. Sekolah Penggerak is a government program aimed at holistically developing student learning outcomes through the profil pelajar pancasila, encompassing both cognitive and non-cognitive aspects (Patilima, 2022).

Based on the results of preliminary research conducted at the Sekolah Penggerak SDN 4 Gulang, Mejobo District, Kudus Regency, it was found that teachers had received training regarding the Merdeka Mengajar Platform. However, teachers complained that the Merdeka Mengajar Platform added to their workload, as they were required to complete numerous topics. Furthermore, implementing instruction aligned with the Merdeka Mengajar Platform required additional time to prepare teaching materials. Nevertheless, teachers continued to study the teaching materials available on the Merdeka Mengajar Platform, using them as a reference in the learning process by adapting them to the needs and conditions of the classroom. The preliminary research findings indicate that the Sekolah Penggerak SDN 4 Gulang experienced obstacles in implementing the Merdeka Mengajar Platform within the learning process.

Previous research indicates that the utilization of the Merdeka Mengajar Platform is an effort to enhance teacher competence, while also independently improving the quality of learning by 87%. The impact of using the Merdeka Mengajar Platform can support the implementation of Kurikulum Merdeka through its benefits as a reference for understanding, applying, and realizing instruction. As many as 23% of teachers still face challenges in utilizing the Merdeka Mengajar Platform, as they remain unfamiliar with new terminologies regarding Kurikulum Merdeka that they do not yet understand (Setiaryni, 2023).

Based on this background, the researcher aims to delve deeper into the implementation of the teaching materials feature on the Merdeka Mengajar Platform within the learning process. This study was conducted with the objective of contributing

to the field of education by serving as a reference for the implementation of the Merdeka Mengajar Platform in elementary schools. Specifically, it focuses on the implementation of the teaching materials feature from the planning and execution processes to the assessment of learners on the 2D shapes material in the second grade. This research is important because the Merdeka Mengajar Platform is part of Kurikulum Merdeka. Therefore, educational units must understand and master the Merdeka Mengajar Platform to realize learning activities that align with the outcomes intended by Kurikulum Merdeka.

METHOD

This study is a qualitative descriptive research using a case study approach. A qualitative research method was employed in this study to obtain meaningful data (Sugiyono, 2019). Case study research is a method conducted in detail and depth regarding an event or activity of an individual or group, aiming to gain an in-depth understanding of that event (Nyangfah Nisa Septiana¹, Zulfatul Khoiriyah², Shaleh³, 2024). This research was conducted at one of the Sekolah Penggerak, namely SDN 4 Gulang, located in Gulang Village, Mejobo District, Kudus Regency. This study was conducted from January to June of the 2024/2025 academic year. This study aims to describe the implementation of the teaching material feature in the learning of 2D shapes for second-grade students at Sekolah Penggerak SDN 4 Gulang, Mejobo District, Kudus Regency. This research is expected to contribute to the understanding of the application of the Merdeka Mengajar platform features in elementary schools, particularly concerning the effectiveness of using the teaching material feature to support the learning process. Data collection techniques included interviews, observation, and document analysis. Data validity was established using data and source triangulation with an interactive analysis model. Data analysis in this study was performed through data reduction, data display, and conclusion drawing.

RESULTS AND DISCUSSION

The implementation of the Merdeka Mengajar platform in the learning process at the Sekolah Penggerak SDN 4 Gulang, Mejobo District, Kudus Regency, utilizing its teaching tools feature, is as follows:

1. Implementation of the Teaching Tools Feature in Instructional Planning

Instructional planning is the process of preparing detailed lesson plans concerning the development of learning materials, models, media, and strategies to be used in learning activities, with the objective of ensuring effective and efficient implementation of learning (Rahmalia & Sabila, 2024). Instructional planning for the Kurikulum Merdeka must proceed through specific stages and components, including the analysis of learning outcomes (CP), determining learning objective pathways (ATP), developing learning assessments, and creating teaching modules (Apriyanti, 2023). Based on interviews, informants indicated that the teaching tools feature on the Merdeka Mengajar platform provides learning outcomes for all phases and subjects. The initial step taken by the teacher is to analyze the Learning Outcomes for Geometry material for the second grade, specifically at the end of Phase A, within the teaching tools feature. Learning outcomes are defined as the competencies that students must achieve at each phase, as determined and structured by the government. The learning outcomes for this material are: At the end of Phase A, students are able to recognize various 2D shapes (triangles, quadrilaterals, polygons, circles) and 3D shapes (cuboids, cubes, cones, and spheres). They can compose (composition) and decompose (decomposition) 2D shapes (triangles, quadrilaterals, and polygons). Students can also determine the position of objects relative to other objects (right, left, front, back).

After analyzing the learning outcomes, the teacher then delineates them into learning objectives. These established learning objectives are then sequenced into a systematic learning objective pathway spanning from the beginning to the end of the learning phase (Badan Standar Kurikulum dan Asesmen Pendidikan, 2022). On the Merdeka Mengajar platform, a systematically structured learning objective pathway is provided; however, teachers are afforded the opportunity to modify or adapt this pathway according to the conditions and needs of the students in their class. This is consistent with (adelia, 2024), who posits that teachers have the flexibility to implement the learning objective pathways available on PMM in accordance with their classroom conditions. The ATP is adjusted to suit students' learning needs, as each student possesses varying levels of learning capability.

Once the learning objective pathway is established, the next step for the teacher is to design the learning assessment. Assessment is required to ascertain the effective processes and outcomes of the instruction that has been conducted. Assessment in Kurikulum Merdeka is designed according to its function. In conducting assessments, teachers have the discretion to employ techniques and determine timing flexibly to ensure the assessment effectively facilitates the achievement of learning objectives. Teacher discretion in assessment design includes autonomy over determining the implementation schedule, the use of techniques and instruments, the establishment of criteria for achieving learning objectives, and the processing of assessment results. Learning assessments must be designed to be fair, valid, proportional, and reliable so they can elucidate learning progress and be utilized by teachers to determine subsequent instructional steps (Purnawanto, 2022). Teachers study the learning assessment instruments available on PMM, subsequently adapting them to align with the learning objectives and the capabilities of their students.

The components that have been analyzed are then compiled into a learning plan known as a teaching module (*modul ajar*). A teaching module is a learning plan structured according to the topic and scope of the class. The teaching module includes objectives, procedures, media, assessments, as well as other learning information and references (Purnawanto, 2022). The components of a teaching module in the Kurikulum Merdeka include general information, such as (a) the module author's identity, (b) initial competencies, (c) the Pancasila student profile, (d) facilities and infrastructure, (e) target students, and (f) the learning model employed. The core components contain (a) learning objectives, (b) assessment, (c) meaningful understanding, (d) guiding questions, (e) learning activities, and (f) learning reflection. Meanwhile, the appendices in the teaching module include (a) student worksheets, (b) enrichment and remedial materials, (c) reading materials for educators and students, (d) a glossary, and (e) a bibliography (Rahmadayanti & Hartoyo, 2022). Teachers use teaching modules downloaded from the teaching materials feature as a reference in developing their own teaching modules. The components within the teaching modules are interconnected, prompting teachers to modify several components to suit the learning needs of their students. In the Kurikulum Merdeka, teachers are given the freedom to develop flexible teaching materials, which facilitates the implementation of learning activities tailored to classroom conditions.

The teaching materials provided by PMM are comprehensive, ranging from teaching modules, subject materials (such as 2D shapes), learning assessment tools, learning reflections, and a glossary. Based on observations, teachers do not use the teaching modules from PMM directly; instead, they modify the modules to align with the planned learning activities. The material available on PMM already covered 2D shapes, whereas the students in the class were just being introduced to the topic. Consequently, the teacher replaced the material in the module to

match what was to be studied. The media used by the teacher also differed from those suggested in the PMM. In 2nd-grade geometry instruction, the teacher used 2D shapes printed on paper; furthermore, the teacher utilized the school environment as a learning medium and resource for students. The use of tangible objects from the children's immediate environment can foster optimal learning comprehension and help transform abstract thinking into concrete understanding (Larasati et al., 2024). The results of the document analysis conducted by the researcher indicate that the teaching materials compiled by the teacher originated from those downloaded from the Platform Merdeka Mengajar. These teaching materials were subsequently modified to suit the specific needs of the planned instruction.

Based on the research results above, it can be concluded that the implementation of the teaching materials feature in second-grade geometry instruction begins with analyzing the CP, determining the ATP, designing assessments, and subsequently developing teaching modules using the modules on PMM as a reference.

2. Implementation of the Teaching Materials Feature in the Learning Process

The implementation of the teaching materials feature of the Merdeka Mengajar platform in the learning process for two-dimensional shapes in the second grade of Sekolah Penggerak SDN 4 Gulang, Kec. Mejobo, Kab. Kudus, serves as a reference for conducting instruction. Teaching modules are a set of learning programs, packaged comprehensively and systematically, that contain planned learning experiences to help students achieve predetermined learning objectives (Salsabilla et al., 2023). Based on the observations conducted, the teaching materials feature was not implemented directly. Instead, the teacher used teaching modules that had been developed and adapted to learning needs as a guide for conducting teaching and learning activities, ensuring that learning was carried out systematically and the objectives were achieved.

The teaching materials that can be implemented in the learning process are not limited to teaching modules; the teacher also utilizes student worksheets provided within the teaching materials feature. These student activity sheets were aligned with the learning objectives for the second-grade material on two-dimensional shapes. The student activity sheets were used during the core phase of the learning activities. The student activity sheets contain learning materials and activities presented in a format different from that of existing textbooks (Ma'wa & Gunansyah, 2024)

Based on the results of an interview conducted with the fifth-grade teacher informant, the teaching materials feature also provides learning materials that can be used as a resource by both teachers and students. This aligns with the findings of (Rahmawati et al., 2024), who stated that the *Merdeka Mengajar* platform can help teachers and students obtain high-quality learning materials and improve the quality of instruction with materials adapted to the *Kurikulum Merdeka*, thereby enabling teachers to create relevant and meaningful learning experiences for students. In this study, the teacher did not use the materials available on the PMM; the geometry materials available in the teaching materials feature only included material on three-dimensional shapes, whereas the instruction conducted in the second grade was on the material of three-dimensional shapes.

The research results indicate that the teaching materials feature can be implemented in the learning process by applying teaching modules as a reference for instruction. The provided student activity sheets can be utilized during core learning activities; furthermore, the teaching materials feature can also serve as a learning resource to enhance student understanding.

3. Implementation of the Teaching Materials Feature in Learning Assessment

Learning assessment is crucial for determining the outcomes of the completed learning process. The assessment results are used as material for reflection to improve subsequent instruction (Maylafisa et al., 2024). Learning assessments are aligned with the learning outcomes and objectives. The assessments conducted by the teacher, namely assessment for learning, are carried out during instruction and include feedback through discussion and question-and-answer sessions. Meanwhile, assessment of learning is conducted at the end of instruction. The teaching materials feature provides comprehensive assessment instruments, such as evaluation instruments and answer keys, as well as learning reflection instruments containing feedback questions.

The results of interviews conducted with teacher informants indicate that the implementation of the teaching materials feature in learning assessment involves teachers using the instruments provided for the geometry material. Before using the learning assessment, teachers first analyze the evaluation questions and adapt them to the learning outcomes and objectives to be achieved by students. In this study, the teacher evaluated students using a written test technique, where students completed the evaluation questions individually. Evaluation is a process of making decisions based on assessment results, aiming to determine the effectiveness of learning and serving as a basis for the teacher to take further action (Natasya Lady Munaroh, 2024). However, the researchers found that the evaluation questions available on PMM were not yet able to meet the needs of all students. The teaching materials feature on PMM only provides one type of question with a uniform difficulty level. In contrast, the human brain tends to prefer challenges with a difficulty level appropriate to their abilities, which can encourage the continuous development of students' thinking skills (Putri & Siswanto, 2024).

In addition to assessing learning outcomes in the cognitive domain, the teacher also conducts assessments in the skills domain by having students group surrounding objects based on the type of 2D shapes within their respective student groups. Affective assessment utilizes instruments already available in the teaching module on the teaching tools. The teacher also implements reflection instruments provided by the teaching tool features at the end of the learning activity. The implementation of reflection is beneficial for teachers to evaluate and find solutions to correct errors during the instructional process (Seco & Cendana, 2022). The reflection section for students includes questions that inquire about the difficulties they experienced and how they overcame those difficulties while learning the material on 2D shapes. It also contains questions regarding students' learning habits. The teacher utilizes all these reflection questions, combining them with teacher-posed questions about students' feelings after participating in the completed learning activities.

From these findings, it can be concluded that the teaching tool features on the platform merdeka can be implemented in learning assessment activities. Implementation is carried out by using evaluation instruments as well as reflection instruments for teachers and students, adapting these instruments to the learning needs.

CONCLUSION

The instructional materials feature available on the Merdeka Mengajar platform is a feature that contains learning resources such as teaching modules, materials, assessment tools, and learning reflections. The implementation of the instructional materials feature can begin at the lesson planning process by utilizing these materials

and adapting them to the conditions and needs of students. In the instructional implementation process, teachers use the prepared teaching modules as a guideline for delivering learning. Additionally, teachers use student worksheets from the instructional materials feature, which are adapted to the learning objectives for the core activities. In learning assessment, the implementation of the instructional materials feature lies in the use of individual evaluation instruments and learning reflections. Based on the foregoing, it can be concluded that the implementation of the instructional materials feature, when adapted to classroom conditions, can be carried out during the planning, implementation, and assessment processes of learning. Thus, it can be said that the Merdeka Mengajar platform can assist teachers in the learning process in Sekolah Penggerak elementary schools, particularly in grade 2 for the topic of 2D shapes.

REFERENCES

- Adelia. (2024). Jurnal Pendidikan Integratif Jurnal Pendidikan Integratif. *Jurnal Pendidikan Integratif Jurnal Pendidikan*, 5(3), 115–122.
- Apriyanti, H. (2023). Penyusunan Perencanaan Pembelajaran Pada Kurikulum Merdeka. *Education Journal: Journal Educational Research and Development*, 7(1), 15–20. <https://doi.org/10.31537/ej.v7i1.970>
- Aulia, D., Murni, I., & Desyandri, D. (2023). Peningkatan Kompetensi Guru Sekolah Dasar melalui Platform Merdeka Mengajar (PMM). *Jurnal Ilmiah Profesi Pendidikan*, 8(1b), 800–807. <https://doi.org/10.29303/jipp.v8i1b.1310>
- Badan Standar Kurikulum dan Asesmen Pendidikan. (2022). Panduan Pengembangan Kurikulum Operasional Satuan Pendidikan. *Kementerian Pendidikan, Kebudayaan, Riset, Dan Teknologi*, April, 118.
- Kurniawan, A., Malinda, L., & Ramadianti, A. A. (2024). Penerapan Aplikasi Platform Merdeka Mengajar Terhadap Guru SDN 104256 Rugemuk. *Tematik: Jurnal Penelitian Pendidikan Dasar*, 3(2), 121–125. <https://doi.org/10.57251/tem.v3i2.1497>
- Larasati, W. E., Wahyuni, D., & Astuti, M. (2024). Media Benda Nyata Specimen: Eksperimen Terhadap Stimulasi Sensori Anak. *Edukids: Jurnal Pertumbuhan, Perkembangan, Dan Pendidikan Anak Usia Dini*, 21(2), 113–123. <https://doi.org/10.17509/edukids.v21i2.71701>
- Ma'wa, M. K., & Gunansyah, G. (2024). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis Ekoliterasi Pada Materi Permasalahan Lingkungan Kelas V Sekolah Dasar. *Jpgsd*, 12(4), 581–594.
- Maylafisa, N., Setyo Wardhani, I., Raya Telang, J., Telang Inda, P., Kamal, K., Bangkalan, K., & Timur, J. (2024). PT. Media Akademik Publisher ASESMEN FORMATIF SEBAGAI PENILAIAN PEMBELAJARAN DI ERA KURIKULUM MERDEKA. *JMA: Jurnal Media Akademik*, 2(11), 3031–5220.
- Natasya Lady Munaroh. (2024). Asesmen dalam Pendidikan: Memahami Konsep, Fungsi dan Penerapannya. *Dewantara: Jurnal Pendidikan Sosial Humaniora*, 3(3), 281–297. <https://doi.org/10.30640/dewantara.v3i3.2915>
- Nyangfah Nisa Septiana¹, Zulfatul Khoiriyah², Shaleh³. (2024). 10.
- Patilima, S. (2022). Sekolah Penggerak Sebagai Upaya Peningkatan Kualitas Pendidikan. *Prosiding Seminar Nasional Pendidikan Dasar*, 0(0), 228–236. <http://ejurnal.pps.ung.ac.id/index.php/PSNPD/article/view/1069>
- Purnawanto, A. T. (2022). Perencanaan Pembelajaran Bermakna dan Asesmen Kurikulum Merdeka. *Jurnal Ilmiah Pedagogy*, 20(1), 75–94.
- Putri, H. A., & Siswanto, D. H. (2024). Teaching at The Right Level (TaRL) as an Implementation of New Education Concepts in the Insights of Ki Hajar Dewantara. *Indonesian Journal of Educational Science and Technology*, 3(2), 89–100.

- <https://doi.org/10.55927/nurture.v3i2.9297>
- Rahmadayanti, D., & Hartoyo, A. (2022). Potret Kurikulum Merdeka, Wujud Merdeka Belajar di Sekolah Dasar. *Jurnal Basicedu*, 6(4), 7174–7187. <https://doi.org/10.31004/basicedu.v6i4.3431>
- Rahmalia, S. M., & Sabila, N. D. (2024). Perencanaan Pembelajaran: Pengertian, Fungsi dan Tujuan. *Karimah Tauhid*, 3(5), 6014–6023. <https://doi.org/10.30997/karimahtauhid.v3i5.13275>
- Rahmawati, Gresinta, E., & Suhendra. (2024). *Platform Merdeka Mengajar sebagai Inovasi dalam Dunia Pendidikan*. 06(06), 24–28. <http://www.ijosmas.org>
- Romadhon, K., & Irfan. (2025). Analisis Kompetensi Guru terhadap Penyusunan Perangkat Pembelajaran pada Kurikulum Merdeka di Sekolah Dasar Teacher Competency Analysis of Preparing Learning Tools for the Independent Curriculum in Elementary Schools. *Jurnal Pendidikan Dan Kebudayaan*, 15, 111–123.
- Salsabilla, I. I., Jannah, E., & Juanda. (2023). Analisis Modul Ajar Berbasis Kurikulum Merdeka. *Jurnal Literasi Dan Pembelajaran Indonesia*, 3(1), 33–41.
- Seco, V. Y. R., & Cendana, W. (2022). Penerapan Refleksi Pribadi Untuk Membantu Guru Menjalankan Peran Sebagai Fasilitator Pada Pembelajaran Daring. *Padma Sari: Jurnal Ilmu Pendidikan*, 1(02), 103–116. <https://doi.org/10.53977/ps.v1i02.371>
- Setiariny, E. (2023). Pemanfaatan Platform Merdeka Mengajar Sebagai Upaya Meningkatkan Kualitas Pembelajaran. *Jurnal Lingkar Mutu Pendidikan*, 20(1), 23–33. <https://doi.org/10.54124/jlmp.v20i1.81>
- Sugiyono. (2019). *Metode penelitian kuantitatif kualitatif dan R&D*. Alfabeta.
- Surani, D., Asnawati, A. N., & Kusuma, A. W. (2022). Sosialisasi Aplikasi Merdeka Mengajar Dan Pengenalan Platform Simba Dalam Meningkatkan Pemahaman Media Pembelajaran Kepada Tenaga Pendidik Di Smpn 10 Cilegon. *Jubaedah : Jurnal Pengabdian Dan Edukasi Sekolah (Indonesian Journal of Community Services and School Education)*, 2(2), 164–171. <https://doi.org/10.46306/jub.v2i2.77>