



Evaluation the Implementation of the Merdeka Curriculum in Mathematics Learning

Nur Ikhsan Ismail¹, Baso Intang Sappaile², Iwan Suhardi³

^{1,2,3}Educational Research and Evaluation, State University of Makassar, Indonesia

*Email: ikhsanmael11@gmail.com

ARTICLE INFO

Keywords:

CIPP

Merdeka Curriculum

Evaluation

Mathematics Learning

ABSTRACT

Purpose—This research is an evaluative study that aims to evaluate the implementation of the Merdeka curriculum in mathematics learning at SMP Negeri 1 Duampanua.

Methodology—The evaluation model used is the CIPP (Contextual, Input, Process, Product) model. The principal, mathematics teachers, and students were the subjects of evaluation in this research. The data collection techniques used were questionnaires, interviews, and documentation. The data analysis technique used was descriptive analysis.

Findings - The results of the research indicate that: 1) The Operational Curriculum of the Education Unit (KOSP) at SMP Negeri 1 Duampanua has met expectations, namely by applying the principles of KOSP development, containing the characteristics of the education unit, having a vision, mission, and objectives, regulating learning, planning learning, and planning assistance for evaluation and professional development of educators, 2) The capacity of the educational unit at SMP Negeri 1 Duampanua still needs to be improved and strengthened, 3) The mathematics learning process at SMP Negeri 1 Duampanua has met the established criteria, which include mathematics learning planning, implementation of mathematics learning, and evaluation of mathematics learning, 4) Student learning outcomes in mathematics are in line with the Criteria for Achieving Learning Objectives (KKTP).

Significance - This research can contribute to curriculum policy development, especially in implementing the Merdeka Curriculum in mathematics learning in junior high schools. The findings of this study can provide insights for policymakers to evaluate the effectiveness of the curriculum and develop improvement measures, as well as for teachers to improve learning methods that align with the principles of the Merdeka Curriculum. Additionally, the results of this study can help students improve their understanding and motivation in learning mathematics and serve as a reference for further research on the implementation of this curriculum at various levels of education.

Received 29 January 2025; Received in revised form 8 February 2025; Accepted 15 June 2025

Jurnal Eduscience (JES) Volume 12 No. 3 (2025)

Available online xx June 2025

INTRODUCTION

Education is one of the most important factors in determining the progress of a nation and state (Widiensyah, 2018 in Al-Ghifary et al., 2023). In Indonesia, education development is always associated with periodic curriculum updates. The curriculum is important to ensure appropriate and effective learning for students (Ekayana, A. A. G., & Ratnaya, I. G., 2022). The merdeka curriculum is one of the solutions to restore education in Indonesia so that other countries do not leave it behind (Nugraha, 2022; Nabila, S., & Nadlir, 2025). The Merdeka curriculum emphasizes allowing learners to organize and manage their learning process according to their interests, talents, and needs (Shah et al., 2025). In addition, according to Permendikbudristek Number 22 of 2016 concerning Process Standards for Primary and Secondary Education, the Merdeka Curriculum provides freedom to schools and teachers in developing and implementing teaching and learning activities that are appropriate to the context and needs of students.

However, curriculum implementation in the field often faces various obstacles, ranging from the readiness of human resources to supporting infrastructure (Gunarso, 2021). In addition, the lack of understanding and skills in implementing the curriculum can be a significant obstacle to the successful implementation of the curriculum (Sumardi, 2022). This is due to the curriculum that has just been implemented, so the relevant parties may still experience confusion in implementing it, which in turn creates various obstacles (Windayanti, 2023). Based on preliminary observations made by researchers through interviews with junior high school supervisors in the duampanua sub-district, several facts were found that the common obstacle conveyed by teachers was their readiness to implement it during learning, including in the aspects of planning, implementation, and assessment. Teachers are not only required to understand the content of the curriculum but also to be able to implement it effectively (Nabila, S., & Nadlir, 2025).

Various previous studies have also identified barriers in curriculum implementation in schools. For example, research by Akbar et al (2023) at SMP Negeri 20 Simbang stated that mathematics teachers faced difficulties in implementing the merdeka curriculum, such as a lack of in-depth understanding of the merdeka curriculum, time constraints, and limited technological facilities, such as internet access and delays in providing books as teaching tools (Harahap & Nazliah, 2019). In addition, research by Luthfia et al (2024) regarding implementing the Merdeka curriculum in social studies learning at SMP 11 Muhammadiyah faced several obstacles, including using learning methods, facilities, resources, and limited learning time. Therefore, monitoring and reviewing the curriculum during implementation is important to determine its effectiveness and success (Lestari N. A., 2023). Regular curriculum evaluations should be conducted to identify weaknesses and challenges, and provide room for more adaptive refinements to dynamic learning needs.

Curriculum evaluation is important in the education curriculum. This is because the evaluation gives an overview of the strengths and weaknesses of the curriculum developed in schools (Puspitasari et al., 2023). This process involves collecting feedback and information needed to achieve the effectiveness and efficiency of the curriculum in the decision-making process whether to accept, change, or even abolish the existing curriculum and replace it with a new one that is proven to be more effective and suitable for the target users of the curriculum (Orstein & Hunkins, 2009 in Chanpradit, T., 2022). One of the evaluation models that can be used in evaluating the curriculum is the CIPP (Context, Input, Process, and Product) evaluation model.

The CIPP model was created in the 1960s by Daniel Stufflebeam and is considered a decision-oriented model that systematically collects information about a program to identify strengths and limitations in content or delivery, in order to improve the effectiveness of the program or plan for the future of the program (Zhang et al., 2011; Nehe et al., 2024). The reason for using this model is that the basic feature that distinguishes this model from other evaluation models is the understanding that evaluation is done not to prove but to improve (Stufflebeam, 2003, in Tuna & Başdal, 2021). This research will be conducted based on the CIPP model which includes four main components: first, on the context evaluation to look at the process of preparing the

Operational Curriculum of the Education Unit (KOSP); second, on the input evaluation which includes the availability of facilities and infrastructure; third, the mathematics learning process; and fourth, the product which assesses the achievement of learning outcomes by the predetermined objectives.

The selection of mathematics learning as the focus of this study is based on the significant challenges teachers face in implementing the Merdeka Curriculum (Saipani et al., 2024). Research by Lumbantoruan (2022) shows that mathematics teachers at the junior high school level face difficulties in preparing lesson plans (RPP), managing classes, and conducting assessments according to the principles of the Merdeka Curriculum. In addition, research by Rizky and Partono (2024) found that students' negative stigma towards mathematics, the low character of students, and inadequate classroom facilities are the main obstacles in implementing this curriculum in Madrasah Tsanawiyah. Thus, this study explores the challenges and effectiveness of implementing the Merdeka Curriculum in mathematics learning at SMP Negeri 1 Duampanua, contributing to developing more adaptive and effective mathematics education.

Although several studies have discussed the implementation of the Merdeka Curriculum at various levels of education, there are still limited studies that specifically evaluate the implementation of this curriculum at the junior high school level, especially in mathematics learning. Furthermore, although there is research related to implementation in the driving schools, there has been no in-depth study evaluating the implementation of the Merdeka Curriculum at SMP Negeri 1 Duampanua, one of the driving schools. This location has unique characteristics in terms of the background of students from various regions, the different conditions of facilities and infrastructure, and the level of teacher readiness in implementing the Merdeka Curriculum. In addition, until now, no research has specifically examined the evaluation of the Merdeka Curriculum in Duampanua District, Pinrang Regency. Therefore, this research is important for a deeper understanding of the challenges and effectiveness of implementing the Merdeka Curriculum.

METHODOLOGY

Research Design

This type of research is evaluative research. Kantun (2017) explains that evaluative research is a research activity that evaluates a program and aims to measure the success of a program and determine whether it is achieving the planned objectives. The evaluation model used is the CIPP (Context, Input, Process, Product) evaluation model, which will evaluate the Merdeka curriculum implementation in mathematics learning at SMP Negeri 1 Duampanua. Researchers chose the CIPP model because this model is complete enough to evaluate a merdeka curriculum implementation program in mathematics learning in mathematics learning at SMP Negeri 1 Duampanua. This study grouped program components into context, input, process, and product. Thus, it can be identified which components have not been achieved.

Participant

This study involved 7 participants, consisting of 1 principal, three mathematics teachers, and three students at SMP Negeri 1 Duampanua. According to Creswell, J. W., & Clark (2017), purposive sampling is a technique with specific considerations. Subject selection criteria include: (1) the school has implemented Merdeka Curriculum for three years, (2) the school is a Mover School which is part of the priority program of the Ministry of Education, Culture, Research, and Technology, (3) mathematics teachers have participated in training on implementing Merdeka Curriculum, and (4) the students involved are active students with good knowledge and skills abilities. Principals and teachers are selected based on their involvement in planning and implementing the Education Unit Operational Curriculum (KOSP). The selection of students is based on involvement in the mathematics learning process.

Data Collection

The data collection techniques used are questionnaires and interview guidelines. The questionnaire in this study uses a Likert Scale in the form of four answer options, including Always (SL) if the statement is

done continuously every day, often (SR) if the statement is done continuously but not every day, sometimes (KK) if the statement is done irregularly which occurs only occasionally or unscheduled, Never (TP) if the statement is never done. The questionnaire was given to 7 respondents, consisting of 1 Principal, 3 Mathematics Teachers, and 3 Learners at SMP Negeri 1 Duampanua. This questionnaire aims to extract information regarding the implementation of KOSP in implementing the merdeka curriculum, the capacity of the education unit in implementing the merdeka curriculum, the mathematics learning process in the merdeka curriculum, and the achievement of students' mathematics learning outcomes in implementing the merdeka curriculum. As for the interview, the guideline instrument was addressed to 4 respondents, consisting of 1 principal and three mathematics teachers at SMP Negeri 1 Duampanua. This interview aims to discover more details and complement and strengthen information about implementing the Merdeka curriculum.

Before using the questionnaire instrument, a content validation process is carried out through experts to validate the extent to which the content in the instrument can accurately explore the desired information. The expert/expert assessment results were summarized using the instrument assessment method with the Gregory approach. Ruslan (2009) states that instruments with a coefficient of consistency between experts greater than 0.75 can be declared valid because they have a high level of relevance. Based on expert assessment using Gregory's approach, the results showed that all items included 33 statement items for principals, 53 for math teachers, and 15 for students. Based on Gregory's approach, the content validation value on the three questionnaire instruments was obtained as 1 with the relevance criteria at a very high validation level.

In addition to conducting a validation test of the questionnaire instrument, the researcher also conducted a reliability test, which was determined based on the Cronbach's Alpha value, namely the statement item was declared reliable if it was greater than 0.60. The reliability test for this questionnaire instrument was carried out with the help of SPSS version 26, and obtained a Cronbach's Alpha value on the principal questionnaire instrument of 0.918, a mathematics teacher questionnaire instrument of 0.914, and a student questionnaire instrument of 0.833. As for the content validation test on the interview guideline instrument, which was assessed based on the Gregory approach, showed 27 items of principal interview questions and 47 items of mathematics teacher interview questions. Obtained content validation value on both instruments amounted to 1, with relevance criteria at a very high validation level.

Data Analysis

This study's Data analysis techniques used quantitative and qualitative data analysis. Quantitative data analysis techniques can be done in three stages, according to Arikunto, namely 1) research preparation, 2) data tabulation, and 3) data application (Arikunto, 2002 in Suherli et al., 2022). Furthermore, qualitative data analysis is data analysis based on the relationship between one fact and another causally to explain an event (Strauss and Corbin, 2013 in Taali et al., 2023) The qualitative data analysis used as explained by Creswell (2018: 280) there are six steps to analyze data qualitatively, namely as follows: The first stage, starting with collecting raw data such as transcripts, documents, and images. Following the second stage, the data begins to be arranged, for transcripts can be processed in writing, for photos labeled, and others. In the third stage, reading the data as a whole will help in the fourth process, separating the data according to the category and type of information. In the fifth stage, the data begins to be matched with existing theories, and the sixth stage will explain the data with the appropriate theory.

FINDINGS

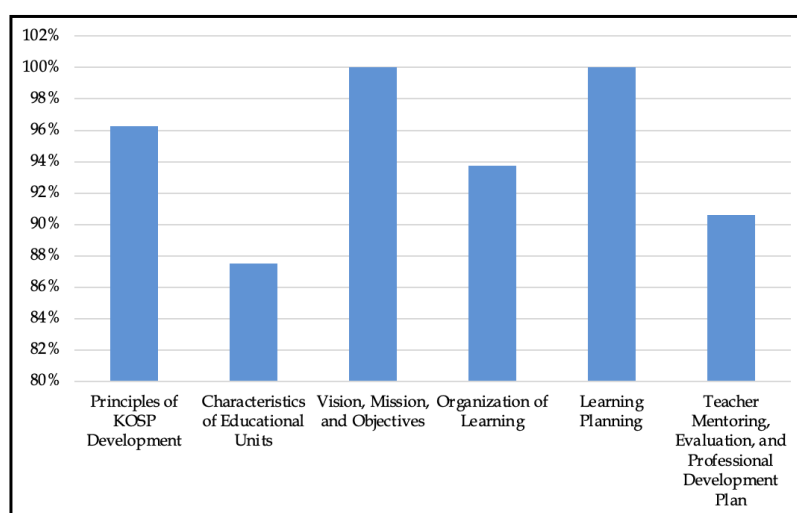
Operational Curriculum for Education Units (KOSP)

Table 1 compares ideal and actual conditions in implementing the Operational Curriculum for Educational Units (KOSP) based on six main indicators, including the application of KOSP principles, characteristics of educational units, learning organization, learning planning, guidance, evaluation, and professional development plans for teachers.

Table 1. Results of the Evaluation of the Operational Curriculum for Education Units (KOSP)

Desired Condition	Actual Condition
Principles of KOSP Development	The percentage of achievement in the evaluation of the implementation of KOSP preparation principles is 96.25%. In addition, the school has provided information proving the implementation of these principles at SMP Negeri 1 Duampanua.
Characteristics of Educational Units	The evaluation of educational unit characteristics achieved 87.5%. Additional information from the school highlights the uniqueness and features outlined in the School Organization and Management Standards (KOSP) at SMP Negeri 1 Duampanua.
Vision, Mission, and Objectives	The achievement rate of the evaluation of vision, mission, and objectives reached 100%. Additionally, the school confirmed that these components were developed based on an analysis of the characteristics and needs at SMP Negeri 1 Duampanua.
Organization of Learning	The evaluation of learning organization achieved 93.75%. Additionally, the school reported the successful integration of learning organization at SMP Negeri 1 Duampanua.
Learning Planning	The learning planning evaluation achieved 100%. The school also stated that planning at the class and educational unit levels has been integrated at SMP Negeri 1 Duampanua.
Teacher Mentoring, Evaluation, and Professional Development Plan	The evaluation of guidance, evaluation, and professional development of educators achieved 90.62%. The school provided information that these plans have been developed comprehensively and organized.

The data in Table 1 above can be visualized in Figure 1 below, which illustrates the achievement of each indicator in a concise and informative manner.

**Figure 1.** Results of the Evaluation of the Operational Curriculum for Education Units (KOSP)

Based on the results of the evaluation of the Education Unit Operational Curriculum (KOSP), several indicators have shown very good achievements, such as the application of the principles of preparing the KOSP with a percentage of 96.25%, having a vision, mission and objectives with a percentage of 100%, containing the organization of learning with a percentage of 93.75%, containing lesson planning with a percentage of 100% and containing plans for mentoring, evaluation and professional development of teachers

with a percentage of 90.62%. This shows that the school has successfully implemented the Education Unit Operational Curriculum (KOSP) although there are aspects that need improvement. The slight decrease in the education unit characteristics indicator, which only reached 87.5%, shows that there are areas that need attention to be in line with national standards. Some of the factors affecting the indicators of education unit characteristics include the characteristics of teaching staff who have variations in classroom management skills. Similarly, the characteristics of students who come from different backgrounds and have differences in academic and non-academic abilities. Therefore, schools need to focus more attention on identifying and developing distinctive local characteristics to achieve more optimal results.

Capacity of the Education Unit

Table 2. Results of the Evaluation of Educational Unit Capacity

Desired Condition	Actual Condition
Teacher qualifications	The percentage of achievement in teacher qualification evaluation is 98.44%. In addition, the school has confirmed that teachers at SMP Negeri 1 Duampanua have relevant qualifications and teaching certificates.
Availability and suitability of facilities and infrastructure	The evaluation of the availability and suitability of facilities and infrastructure reached 81.25%. In addition, the school reported that the facilities and infrastructure at SMP Negeri 1 Duampanua are in very good condition.
Support from the local government	Support from the local government has reached 78.12%. Additionally, the school stated that the Education Office has been actively involved in supporting teacher development through training programs and the provision of necessary facilities.
Leadership of the principal and vice principal	The evaluation of leadership in the curriculum, involving the principal and vice principal, reached 100%. The school also revealed that the principal has created a vision and mission focused on learning, while the principal and vice principal actively monitor and improve teacher quality through guidance and evaluation.

Table 2 above provides information comparing actual conditions with expected conditions, accompanied by confirmation from the school regarding the capacity of the educational unit for each indicator, including teacher qualifications, availability and suitability of facilities and infrastructure, local government support, and leadership of the school principal and vice principal in charge of the curriculum. To provide a clearer picture of the achievement level of each indicator, the data in Table 2 is visualized in the following Figure 2.

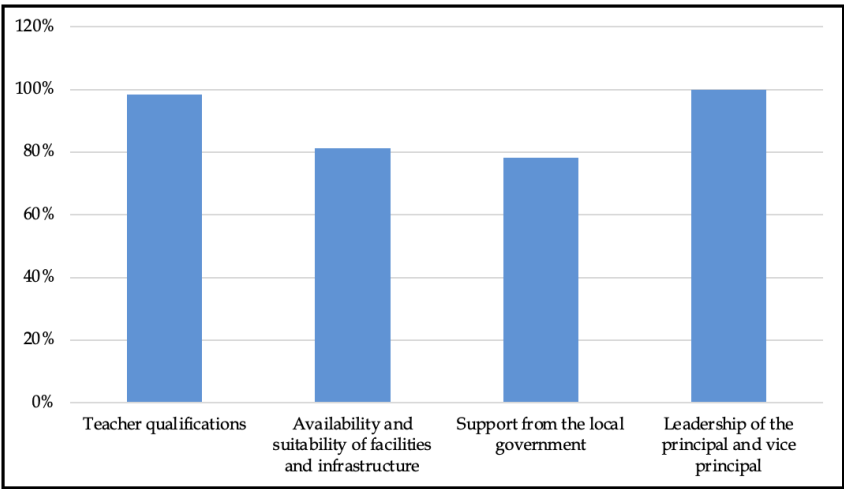


Figure 2. Results of the Evaluation of Educational Unit Capacity

The evaluation of the capacity of the education unit showed a very good achievement in the educator qualification indicator, with a percentage of 98.44%, which includes educators with a bachelor's degree in mathematics and a teaching certificate. The leadership of the principal and vice principal for curriculum scored 100%, indicating that both parties have performed their duties well through regular supervision and evaluation of teachers' performance. This reflects their strong efforts to improve the quality of education. However, the assessment of the availability of facilities and infrastructure, which only reached 81.25%, shows that although the existing facilities are adequate, some aspects still need improvement, such as the rejuvenation of facilities and infrastructure, which is still limited by the available budget. Therefore, further improvement of facilities and support from the local government is needed to support more optimal education development.

Math Learning Process

Table 3. Results of Evaluation of Math Learning Process

Desired Condition	Actual Condition
Math lesson planning	The percentage of achievement in mathematics lesson planning evaluation is 100%. In addition, feedback from mathematics teachers indicates compliance with the established criteria.
Implementation of mathematics learning	The evaluation of mathematics learning implementation achieved 68.75%. Additionally, input from mathematics teachers indicates compliance with established standards. This is further supported by student evaluations, which reached 83.33%.
Evaluation of mathematics learning	The evaluation of mathematics learning achieved 83.33%. Additionally, data from mathematics teachers confirm alignment with the established criteria.

Table 3 above details the components of the learning process evaluation and the results of each component, along with feedback from teachers and students. The mathematics learning process includes three indicators: mathematics lesson planning, mathematics lesson implementation, and mathematics lesson evaluation. The data in Table 3 will be visualized in the following Figure 3.

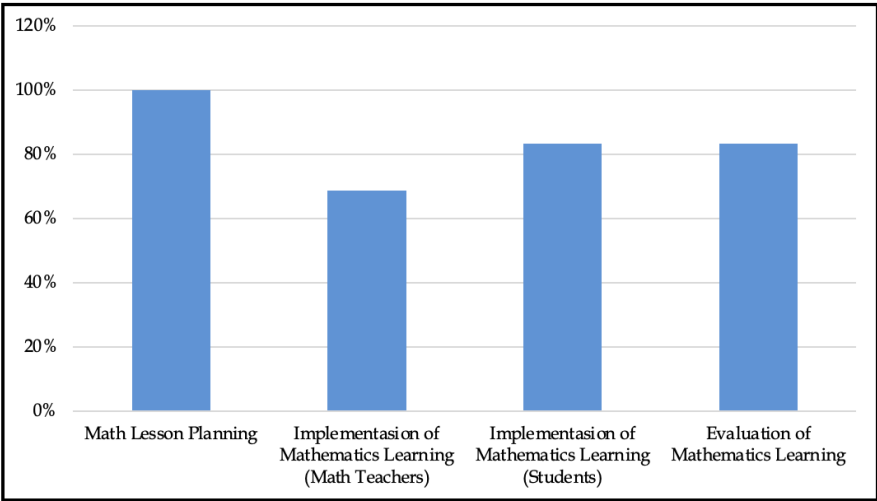


Diagram 3. Results of Evaluation of Math Learning Process

The mathematics learning process showed varying results, with lesson planning reaching 100%. However, lesson implementation only reached 68.75, indicating a mismatch between lesson plans and lesson implementation. This is due to teachers' difficulties in implementing differentiated learning in the classroom and in utilizing media and technology in the learning process. Although the learning evaluation reached 83.33%, the results of students' evaluation on learning implementation showed a higher achievement of 83.33%, which indicates that although the learning implementation in the field still needs improvement,

students can feel the positive impact of the learning implementation. Therefore, more training is needed for teachers to implement more interactive learning methods that suit students' needs.

Achievement of Mathematics Learning Outcomes of Students

Table 4. Results of the Evaluation of the Achievement of Mathematics Learning Outcomes of Student

Desired Condition	Actual Condition
Math Learning Achievment of Students	The percentage of student achievement in mathematics learning assessment is 83.37%. In addition, information from mathematics teachers also shows that the criteria set are in accordance with the Learning Objective Achievement Criteria (KKTP).

Table 4 above presents data on learning outcomes based on teacher evaluations of students' achievement of KKTP. These achievements are also displayed visually in Figure 4 below, which shows students overall learning outcomes more concisely.

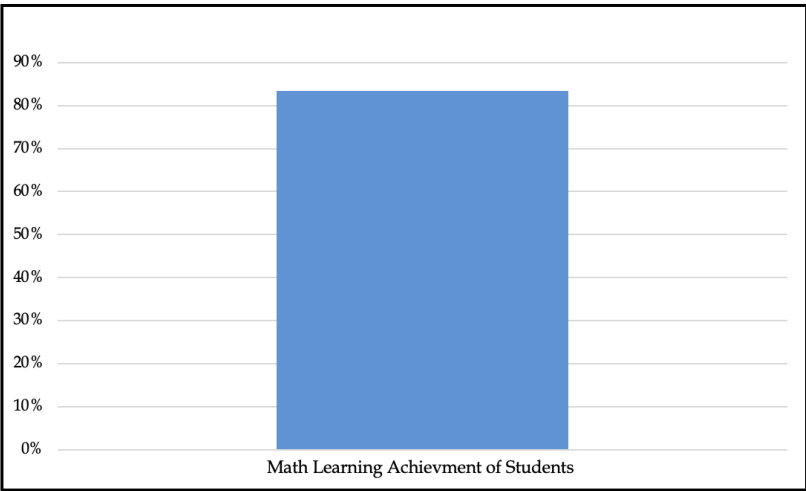


Figure 4. Results of the Evaluation of the Achievement of Mathematics Learning Outcomes of Student

The achievement of student learning in mathematics reached 83.37%, which shows that most students have understood the material well and demonstrated mastery of the learning objectives set. The percentage results reflect that student learning outcomes align with the Criteria for Achievement of Learning Objectives (KKTP), where some students have reached and even exceeded the minimum standards set. Therefore, it is necessary to strengthen learning strategies that sharpen concept understanding and provide reinforcement for KKTP achievements to maintain and improve the quality of student learning outcomes.

DISCUSSION

Operational Curriculum for Education Units (KOSP)

Applying KOSP Development Principles

Applying the principles of developing the Operational Curriculum for Education Units (KOSP) is crucial in implementing the Merdeka curriculum. These development principles aim to facilitate the thinking process in designing the KOSP in education units and serve as a basis for planning, implementing, and evaluating the curriculum. The Education Curriculum and Assessment Standards Board (2022) explains that an effective curriculum must fulfill several important principles. First, the curriculum must be learner-centered, meaning learning is tailored to students' potential, needs, and developmental stages. Second, the curriculum must be contextualized, reflecting the characteristics of the education unit, socio-cultural, and environment. Third, the curriculum must be essential, covering important information with straightforward and easy-to-understand language. In addition, the principle of accountability is also important, where the curriculum must be data-

based and accountable. Finally, curriculum development should involve various stakeholders, such as education committees, parents, and industry, under the coordination of the education office.

Based on the research results, SMP Negeri 1 Duampanua has implemented the KOSP development principles well. Implementing these principles contributes significantly to successfully implementing the Merdeka curriculum at the school. By focusing on learners, SMP Negeri 1 Duampanua succeeds in creating more personalized learning and being responsive to students' individual development. Effective implementation of the KOSP can also enable education units to adapt the curriculum to the local context, which is in line with the provisions in Law No. 20/2003 on the National Education System in Article 36 paragraph 2 that the curriculum at all levels and types of education is developed with the principle of being verified according to the education unit, regional potential, and learners. Wilda (2024) emphasized that the strategy in developing a merdeka curriculum is to adapt the national curriculum by considering the needs and characteristics of students and local and cultural values.

Successful curriculum implementation requires development that is responsive to student needs, local contexts, and active participation from all stakeholders (Amin, 2024). Therefore, applying KOSP development principles in the Merdeka curriculum is a tool to improve the relevance and effectiveness of education. The application of the KOSP development principles in SMP Negeri 1 Duampanua shows that this approach is efficacious in improving the quality and relevance of the curriculum, as well as strengthening the achievement of educational goals integrated with the local context

Contains Education Unit Characteristics

Education unit characteristics reflect the uniqueness of a school in various aspects, including students, social, cultural, teachers, and education personnel. In preparing the Education Unit Operational Curriculum (KOSP) in the Merdeka curriculum, education units are given the freedom to develop a curriculum based on local contexts and needs (Hattarina et al., 2022; Marlina, 2022). At SMP Negeri 1 Duampanua, the characteristics of the education unit in the organizational aspect show that this school is the only driving school in the sub-district at the junior secondary level, which is a major supporting factor in the learning process. In terms of environment, the school is strategically located in the center of the sub-district capital, which supports accessibility and social interaction. Regarding socio-cultural factors, learners have diverse regional backgrounds, reflecting cultural diversity. Learners' interests and talents are also very diverse, enriching the dynamics of the learning process. These background differences strengthen the argument that implementing the Pancasila learner profile can be done comprehensively. In addition, the characteristics of teachers at SMP Negeri 1 Duampanua, which include the ability to teach effectively, the use of technology, and the creation of a pleasant learning atmosphere, make a positive contribution in analyzing the learning needs of students as part of curriculum development. In line with Lestari's (2020) opinion, one of the basic assumptions in curriculum development is that educational programs must be based on an in-depth analysis of the needs of learners.

Vision, Mission, and Goals

An education unit's vision, mission, and goals are important components that guide quality learning. According to Feyza (2023), the vision and mission provide a clear and focused framework for the school to influence all aspects of education and student development and help achieve the desired goals. SMP Negeri 1 Duampanua has formulated a vision, mission, and objectives based on the analysis of the characteristics of the education unit, the characteristics of educators, and the characteristics of students. The formulation of the education unit's vision, mission, and objectives at SMP Negeri 1 Duampanua involves all stakeholders. As stated by Alwadai (2024), preparing the school's vision and mission involves the participation of the principal, teachers, the school committee, and all stakeholders involved in school policy. In addition, it is necessary to know the needs used as a reference in creating a good learning environment. This is in line with Hidayat (2015) and Amin (2024), who state that a strong vision and mission can shape a positive school culture and support

the achievement of educational goals. This shows that SMP Negeri 1 has committed to not only adopting the vision and mission as a symbolic statement. However, it also uses it as a practical guide in creating a conducive and productive learning environment.

Organizing Learning

According to the Education Standards, Curriculum and Assessment Agency (2022), organizing learning is the way education units organize learning curriculum content over time. Referring to the Decree of the Minister of Education, Culture, Research and Technology No. 262 of 2022 concerning Amendments to the Decree of the Minister of Education, Culture, Research and Technology No. 56 / M / 2022 concerning Guidelines for Implementing the Merdeka Curriculum in the Framework of Learning Recovery, it is explained that learning is grouped into two main activities, namely intracurricular learning and projects to strengthen the profile of Pancasila students. SMP Negeri 1 Duampanua has organized learning by BASKP, including intracurricular, co-curricular, and extracurricular. The learning organization is designed by conducting meetings with teachers assigned to each teacher according to their field of study. In addition, teachers are also given the responsibility of being coaches in co-curricular and extracurricular activities. The organization designed by each school aims for the curriculum to focus on several aspects, such as academics, character development, and social skills. However, SMP Negeri 1 Duampanua has organized learning according to BASKP. Findings from previous research state that schools still fail to implement learning organization practices successfully, even though these practices can expedite school administration and management processes (Sabariah Sharif et al., 2013; Ahmad et al., 2021).

Lesson Planning

According to the Education Standards, Curriculum and Assessment Agency (2022), learning planning in the Merdeka curriculum consists of two scopes: learning planning at the scope of the education unit and learning planning at the classroom level. In learning planning, the scope of the education unit includes formulating and compiling a flow of learning objectives that direct the education unit in planning, implementing, and evaluating learning as a whole (Mansah & Safitri, 2022; Safitri, Lestarani, et al., 2024). This ensures that learning outcomes are more systematic, consistent, and measurable. It differs in classroom learning planning, which includes preparing teaching modules or lesson plans. SMP Negeri 1 Duampanua has implemented learning planning at the scope of the education unit, which has formulated the flow of learning objectives set by the government according to the needs of students. As for lesson planning at the classroom level, teachers at SMP Negeri 1 Duampanua prepare various aspects such as administration, learning tools, materials, and assignments. This is because the learning process requires much preparation. Learning planning preparation is not easy; many factors must be considered, such as curriculum characteristics, student characteristics, and the availability of learning support materials (Nurtanto et al., 2021). Thus, lesson planning at SMP Negeri 1 Duampanua shows promising results and is based on established guidelines.

Educator Mentoring, Evaluation & Professionalism Development Plan

Assistance in planning, evaluation, and development of educators' professionalism is important to make an effort to improve the quality of education. Learning assistance planning aims to directly support educators in implementing effective and innovative teaching strategies (Amin, 2024). SMP Negeri 1 Duampanua has carried out mentoring planning, evaluation, and development of educators' professionalism through supervision, mentoring by principals and vice-principals, and teacher competency development trainings carried out by schools and the government. The involvement of principals and vice-principals in developing educators' professionalism is very influential in supporting educators in improving the quality of education. This is in line with what is revealed by Pidarta (1992) in Rahimah (2022), that a teacher's performance is greatly influenced by the results of the principal's guidance and supervision in the environment. Thus, SMP Negeri 1

Duampanua has taken reasonable steps to improve education quality through planning assistance, evaluation, and developing educators' professionalism.

Education Unit Capacity

Educator Qualifications

The effectiveness of implementing the Merdeka curriculum can be seen from the quality of adequate human resources, one of which is the teacher. The role of the teacher greatly influences the effective learning process that can improve student achievement (Agus et al., 2023). The qualifications of educators at SMP Negeri 1 Duampanua already have a bachelor's degree. By their field of study, they have a Bachelor of Mathematics Education and a professional educator certificate. This is based on Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning National Education Standards Article 20, which explains that the minimum criteria for educator qualifications are academic qualifications as evidenced by diplomas and certificates of expertise. Apart from these qualifications, teachers at SMP Negeri 1 Duampanua also have an understanding of the implementation of the Merdeka curriculum through training related to the implementation of the Merdeka curriculum, the learning community that exists in schools, and the Merdeka learning platform. Seminars and teacher training can improve teachers' quality in the learning process (Hamimah et al., 2022; Zainil et al., 2023).

Availability and Feasibility of Facilities and Infrastructure

Facilities and infrastructure in schools need to be utilized and managed correctly for the benefit of the learning process to run effectively and efficiently (Suranto et al., 2022). In addition, the facilities and infrastructure owned must be feasible to support active, creative, collaborative, fun, and practical learning, and ensure all school residents' security, health, and safety (Amin, 2024). The results showed that the availability of facilities and infrastructure at SMP Negeri 1 Duampanua has not fully supported learning activities and needs to be developed and expanded. However, the feasibility and safety standards are set by the Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning National Education Standards, which is explained in section 7, Articles 1 to 5, regarding Facilities and Infrastructure Standards. Then, the rejuvenation of facilities and infrastructure sometimes experiences limitations because it adapts to the school budget. In addition, local government support is greatly helped by the existence of package book facilities and learning media, and some are still being realized in stages.

Support from the Regional Government

Circular Letter of the Education Curriculum and Assessment Standards Agency Number 2774 of 2022 concerning merdeka Implementation of the Merdeka Curriculum for the 2022/2023 Academic Year explained that, as a form of follow-up to the launch of the merdeka curriculum, it was conveyed to the Provincial Education Office and the Regency / City Education Office to play a role in assisting and overseeing the implementation of the merdeka curriculum in their respective regions. The results of research at SMP Negeri 1 Duampanua show that the Education Office is active in facilitating the development of teacher competence, which includes training for teachers. Other support is provided through facilities and infrastructure, such as packaged books and learning media. Therefore, government support to SMP Negeri 1 Duampanua in implementing the Merdeka curriculum in mathematics learning is going well.

Leadership of the Principal and Vice Principal for Curriculum

Principal leadership plays a huge role in the success of educational units and the achievement of student learning outcomes. As stated by Awodiji, Etejere, and Alao (2019), principals oversee all school educational activities to achieve students' academic achievement. Effective principals perform four key behaviors in "high-leverage" instructional activities: teacher evaluation and feedback; building a productive climate; building professional collaboration and learning communities; and strategically managing personnel and resources

(Jason A. Grissom, 2021). The principal's leadership at SMP Negeri 1 Duampanua has carried out his duties well. The principal routinely supervises teachers when teaching in class, facilitates ongoing program activities through learning communities, and actively monitors teachers. In addition to the principal's leadership, the vice principal's leadership is also important, especially in the field of curriculum. The vice principal for curriculum at SMP Negeri 1 Duampanua has designed the curriculum by adjusting the needs of students through meetings with teachers. In addition, he regularly conducts coaching and evaluates teachers when implementing the Merdeka curriculum.

Math Learning Process

Math Lesson Planning

Starting learning activities without careful planning will hinder the implementation of productive teaching activities (Ilham & Ekber Gülersoy, 2019). In planning learning, teachers must consider several components, namely analyzing learning outcomes to develop learning objectives and the flow of learning objectives, preparing learning methods, developing teaching modules, determining learning methods, preparing materials, and conducting assessments. Mathematics lesson planning at SMP Negeri 1 Duampanua is excellent. Classroom teachers have analyzed learning outcomes by considering the characteristics of students and the resources of educational units. This is by the principles of learning in the Merdeka curriculum, namely learning is designed according to learning needs, and reflects the characteristics and development of diverse learners so that learning becomes meaningful and enjoyable (Center for Assessment and Learning, 2022).

In addition, the results of the learning outcomes analysis have been developed based on the flow of learning objectives. Teachers have developed teaching modules by completing several components, such as objectives, steps, learning media, and assessments based on the flow of learning objectives that have been compiled. Furthermore, in determining learning methods, teachers adjust to the needs of students, the classroom situation, and learning objectives. This aligns with preparing learning materials compiled based on learning outcomes (CP). Then, in preparing assessments, assessments are related to learning objectives and, of course, pay attention to several things such as the characteristics of students, the suitability of assessments with learning objectives, and assessment objectives (BSKAP, 2022).

Implementation of Mathematics Learning

The implementation of mathematics learning at SMP Negeri 1 Duampanua has been achieved well. The implementation of learning includes introductory activities, core activities, and closing activities. In the introductory activity, the teacher conveys the learning objectives so that students can know what the learning objectives are that must be achieved. According to Intan, Kuntarto, and Sholeh (2022), the delivery of learning objectives is important for students to know what goals must be achieved in following the learning. In addition, teachers have also connected learning materials with real examples in everyday life and motivated students to participate actively. This is based on the Regulation of the Minister of Education, Culture, Research and Technology Number 103 of 2014, teachers must create a pleasant learning atmosphere, convey the competencies to be achieved, and provide an overview of the material to be discussed (Istiqlal et al., 2024; Safitri, Rosnawati, et al., 2024; Safitri & Ansari, 2024).

In addition, differentiated learning is also a critical approach in meeting the diverse learning needs of students, based on their abilities and interests, so that they do not feel frustrated in learning (Purba et al., 2021). In addition, the use of media and technology in learning greatly supports the achievement of educational goals, as stated in the Decree of the Head of the Education Standards, Curriculum and Assessment Agency of the Ministry of Education and Culture Number 032/H/KR/2024. Technology, such as tablets, smart boards, and educational games, makes it easier for students to access information and improve learning effectiveness (Hussaini, 2022). At the end of the lesson, the teacher summarizes the material learned and provides feedback

on students' work. This feedback is critical to provide a positive response to learner behavior that requires attention (Hastuti, 2022).

Evaluation of Mathematics Learning

Learning evaluation is a process of determining the value of student learning using specific guidelines in order to achieve predetermined learning objectives (Setiawan, 2021). In measuring student learning outcomes in the implementation of the Merdeka curriculum, there are three criteria used to measure student learning outcomes: diagnostic assessment, formative assessment, and summative assessment (Wulandari, 2023). Diagnostic assessment is carried out at the beginning of learning to know the readiness, learning style, interests, and characteristics of different students (I Kadek Mustika, 2022; Rohim et al., 2021). Formative assessment is a teacher and student activity whose purpose is to monitor, so that students can make improvements after getting input and suggestions from the teacher (Magdalena et al., 2021). Summative assessment is carried out to evaluate the achievement of the intended results in learning (Efendi et al., 2024). Based on the research results at SMP Negeri 1 Duampanua, implementing mathematics learning evaluation, including diagnostic, formative, and summative assessments, is well implemented. Diagnostic assessments are given to students before the teacher starts the lesson to find out the students' initial abilities. Then, teachers give formative assessments during the learning process. As for summative assessment, teachers usually give it at the end of the semester exam to determine the students' overall knowledge.

Achievement of Student Learning Outcomes

Math Learning Achievement of Students

The standard for assessing the achievement of student learning outcomes can be seen from the results of the summative assessment of students. This is explained in the Regulation of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia Number 21 of 2022 concerning Assessment Standards for Early Childhood Education, and Secondary Education in Article 9, that summative assessment at the primary education level and secondary education level as referred to in paragraph 3 aims to assess the achievement of student learning outcomes as the basis for determining grade promotion and graduation from an education unit. This summative assessment provides an overview of the extent to which students have achieved the learning objectives that have been set. The primary purpose of summative assessment is to provide a final assessment that reflects students' understanding and skills (Andayani & Madani, 2023).

Teachers at SMP Negeri 1 Duampanua have shown that the results of summative assessment of students in mathematics learning are good, according to the Criteria for Achievement of Learning Objectives (KKTP). This is based on the Regulation of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia Number 21 of 2022 concerning Assessment Standards for Early Childhood Education, and Secondary Education in Article 9, that the assessment of the achievement of student learning outcomes as referred to in paragraph 7 is carried out by comparing the achievement of student learning outcomes with the criteria for achieving learning objectives. In addition, information from teachers also said that students' scores already reflect students' understanding of the material.

CONCLUSION

Based on the results and discussion of the research, the conclusions of this study are 1) The Operational Curriculum of the Education Unit (KOSP) in the implementation of the merdeka curriculum in mathematics learning at SMP Negeri 1 Duampanua is as expected, 2) The capacity of the education unit in the implementation of the merdeka curriculum in mathematics learning at SMP Negeri 1 Duampanua still needs improvement and repair, 3) The process of learning mathematics in the implementation of the merdeka curriculum at SMP Negeri 1 Duampanua is in accordance with the established criteria, 4) The achievement of mathematics learning outcomes of students at SMP Negeri 1 Duampanua is in accordance with the Learning Objective Achievement Criteria (KKTP).

REFERENCES

- Agus, A. H. R., Yaqin, M. A., & Rahman, K. N. (2023). Human resource management in improving the quality of education. *Journal of Education*, 9(4), 2244- 2251. Nurul Jadid University, Indonesia.
- Ahmad, N. H., Kudus, N., & Syed Ahmad, S. S. (2021). Implementation of learning organization in school. *Humanika Sains*, 15.
- Akbar, M., Ernawati, & Setyawan, D. (2023). Teacher problems in implementing the Merdeka curriculum in seventh grade mathematics learning at SMPN 20 Simbang. *GENIUS: Journal of Education and Learning Innovation*, 1(1), 11-23.
- Al-Ghifary, D. F., Erihadiana, M., & Siregar, H. S. (2023). Curriculum evaluation of Islamic religious in Al-Barokah Elementary School. *Journal of Islamic Education Innovation (JIPAI)*, 3(2).
- Alwadai, M. A. M. (2024). The influence of vision and mission related to the Education and Training Evaluation Commission accreditation in improving the quality of school education. *Journal of International Crisis and Risk Communication Research*, 7(S6), 12.
- Amin, M. Y. (2024). *Evaluation of the implementation of Merdeka Curriculum in Primary Schools of Bulupoddo District, Sinjai Regency* [Thesis, Makassar State University, Postgraduate Program, Educational Research and Evaluation].
- Andayani, T., & Madani, F. (2022). The role of learning assessment in improving student achievement in basic education. *Journal of Education*, 9(2), 924-930. State University of Jakarta, Indonesia.
- Awodiji, O. A., Etejere, P. A., & Alao, B. O. (2019). Principals' Leadership Approaches as Predictors of Students' Learning Outcomes in Oyo Metropolis Public Secondary Schools, Oyo State. *Al-Hikmah Journal of Educational Management and Counselling*, 38-46.
- Education Standards, Curriculum and Assessment Agency. (2022). *Guidelines for Operational Curriculum Development in Education Units*. Central Jakarta: Ministry of Education, Culture, Research and Technology.
- Chanpradit, T. (2022). Curriculum evaluation: Measuring the learning outcomes and satisfaction levels of Thai adult learners with an English for cultural tourism communication course, Suphan Buri, Thailand. *Journal of Education and Learning*, 11(5), 82.
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Creswell, J. W. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Los Angeles: SAGE Publications.
- Ministry of Education. (2003). *Law of the Republic of Indonesia Number 20 Year 2003 on the National Education System*. Jakarta: Directorate General of Primary and Secondary Education.
- Efendi, M., Zulhimmah, Nurhayani, & Harahap, H. A. (2024). Implementation of formative and summative assessments in the Merdeka Curriculum at Madrasah Aliyah Swasta Darul Hadits Huta Baringin. *Cognoscere: Journal of Educational Communication and Media*, 2(2), 64-75.
- Ekayana, A. A. G., & Ratnaya, I. G. (2022). Evaluation of the Computer Systems Undergraduate Program Curriculum Using the Stufflebeam CIPP Model. *Journal of Educational Research and Development*, 6(3).
- Feyza Yudhistira, Aditiya Dwi Pangestu, Alif Akbar, Miftahul Hayatunnisa, Lusi Utari, Yoga Pratama, & Indah Noviyanti. (2023). Function and Effect of Vision and Mission on an Organization of SD Negeri 02 Pulau Besar. *OPTIMAL Journal of Economics and Management*, 3(3), 178-189.
- Gunarso, B. (2021). Evaluation of curriculum implementation in schools. Bandung: Cendana Library Publisher.
- Hastuti, N., Fikri, M., & Wahyuningsih, S. (2022). Education Program Evaluation.
- Hussaini, M. H. AL. (2022). Effect of Information Technology on Education. *International Journal of Information technology and Computer Engineering*, 24, 1-5. <https://doi.org/10.55529/ijitc24.1.5>
- Ilham & Ekber Gülersoy, 2019. Discovery Learning Strategy in Geographical Education: A Sample of Lesson Design. *International Review of Geographical Education Online*, 87.

- Intan, D. N., Kuntarto, E., & Sholeh, M. (2022). Teachers' strategies to achieve learning objectives in mathematics learning in elementary schools. *Journal of BasicEdu*, 6(3). Elementary School Teacher Education, Jambi University.
- Istiqlal, M., Istiyono, E., Widiastuti, Sari, D. K., Danni, R., & Safitri, I. (2024). Construction of Mathematics Cognitive Test Instrument of Computational Thinking Model for Madrasah Aliyah Students. *Nazhruna: Jurnal Pendidikan Islam*, 7(2), 475–492. <https://doi.org/10.31538/nzh.v7i2.4425>
- Jason A. Grissom, A. J. (2021). *How Principals Affect Students and Schools: A Systematic Synthesis of Two Decades of Research*. New York: The Wallace Foundation.
- Ministry of Education and Culture of the Republic of Indonesia. (2014). *Regulation of the Minister of Education and Culture Number 103 of 2014 concerning Learning in Primary and Secondary Education*.
- Ministry of Education, Culture, Research and Technology of the Republic of Indonesia. (2022). *Regulation of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia Number 21 of 2022 concerning Assessment Standards for Early Childhood Education and Secondary Education*. Jakarta: Ministry of Education, Culture, Research and Technology.
- Ministry of Education, Culture, Research and Technology of the Republic of Indonesia. (2022). *Regulation of the Minister of Education, Culture, Research and Technology of the Republic of Indonesia Number 21 of 2022 concerning Education Assessment Standards in Early Childhood Education, Primary Education and Secondary Education*.
- Ministry of Education, Culture, Research and Technology of the Republic of Indonesia. (2022). *Decree of the Minister of Education, Culture, Research and Technology No. 262 of 2022 concerning Amendments to Decree of the Minister of Education, Culture, Research and Technology No. 56/M/2022 concerning Guidelines for Implementing the Merdeka Curriculum in the Framework of Learning Recovery*.
- Lestari, N. A. (2023, January). Analysis of 2013 curriculum problems so it is Changed into the merdeka curriculum. *Nusantara Education Journal*, 8(2), 263-274.
- Lestari, Sri. (2020). *Module Session 9 Needs Analysis in Curriculum Development*: Esa unggul University.
- Lumbantoruan, J. H. (2022). Teachers' Difficulties in Implementing the Merdeka Learning Curriculum for Mathematics Materials at Junior High School (SMP). *AKSIOMA: Journal of Mathematics Education Study Program*.
- Luthfia, A. N., Safitri, D., & Sujarwo. (2024). Analysis of barriers and complexities in implementing Merdeka curriculum in the social studies learning process at SMP 11 Muhammadiyah Jakarta. *Journal of Siber Nusantara Education (JPSN)*, 2(1).
- Magdalena, I., Oktavia, D., & Nurjamilah, P. (2021). Analysis of Summative Evaluation in Thematic Learning for Grade VI Students of SDN Batujaya in the Era of the Covid-19 Pandemic. *ARZUSIN*, 1(1), 137-150.
- Mansah, H., & Safitri, I. (2022). The Effectiveness of Improving Student Mathematics Literacy Through The Use of The Facebook Application. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 11(1), 683–693. <https://doi.org/http://dx.doi.org/10.24127/ajpm.v11i1.4743>
- Marlina, T. (2022). The Urgency and Implications of Implementing the Merdeka Curriculum in Elementary Schools / Madrasah Ibtidaiyah. *Proceedings of Snpe Fkip Muhammadiyah Metro University*, 1 (1), 67-72
- Nabila, S., & Nadlir. (2025). Evaluation of the implementation of Merdeka curriculum using the CIPP (Context, Input, Process, and Product) model. *Journal of Education Research*, 6(2), 302-309.
- Nehe, A., Satyawati, S. T., & Dwikurnaningsih, Y. (2024), Evaluation of comprehensive guidance and counseling program using the CIPP model. *Curriculum Innovation*, 21(3), 1633-1648.
- Nurtanto, M., Kholifah, N., Masek, A., Sudira, P., & Samsudin, A. (2021). Crucial problems in arranging the lesson plan of vocational teachers. *International Journal of Evaluation and Research in Education (IJERE)*, 10(1), 345-354.
- Government of the Republic of Indonesia. (2021). *Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning National Education Standards*. Jakarta: Government of the Republic of Indonesia.
- Permendikbud No. 22/2016 on Process Standards for Primary and Secondary Education.

- Purba, M., Purnamasari, N., & Soetantyo, S. (2021). *Academic Paper on Differentiated Learning Development Principles*. Center for Curriculum and Learning, Education Standards, Curriculum and Assessment Agency, Ministry of Education, Culture, Research and Technology.
- Puspitasari, A., Islam, U., Aji, N., Idris, M., Muadin, A., Islam, U., Aji, N., Idris, M., & Salabi, A. S. (2023). *Evaluation of merdeka curriculum implementation using the cipp model in bontang 1 elementary school*. 8(1), 49-58.
- Rahimah. (2022). Improving the ability of SMP Negeri 10 Kota Tebingtinggi teachers to develop teaching modules for the Merdeka Curriculum through mentoring activities for the 2021/2022 school year. *ANSIRU PAI: PAI Professional Development*, 25.
- Rizky, S., & Partono, P. (2024). Problematics of Implementing Merdeka Curriculum in Mathematics Learning at Madrasah Tsanawiyah. *Al-Khwarizmi: Journal of Mathematics and Natural Sciences Education*.
- Rohim, D. C., Rahmawati, S., & Ganestri, I. D. (2021). Concept of Minimum Competency Assessment to Improve Elementary School Numeracy Literacy for Students. *Varidika Journal*, 33(1), 54-62.
- Ruslan. (2009). Content Validity. *Pa'birit Bulletin*, VI (10), 18-19.
- Harahap, R. D., & Nazliah, R. (2019). Analisis Rencana Pelaksanaan Pembelajaran (Rpp) Biologi Kurikulum 2013 Kelas X Semester 1 Tahun Ajaran 2016/2017 Di Mas Islamiyah Gunting Saga Kualuh Selatan Kabupaten Labuhanbatu Utara. *Jurnal Biolokus*, 2(2), 194. <https://doi.org/10.30821/biolokus.v2i2.536>
- Istiqlal, M., Istiyono, E., Widiastuti, Sari, D. K., Danni, R., & Safitri, I. (2024). Construction of Mathematics Cognitive Test Instrument of Computational Thinking Model for Madrasah Aliyah Students. *Nazhruna: Jurnal Pendidikan Islam*, 7(2), 475-492. <https://doi.org/10.31538/nzh.v7i2.4425>
- Mansah, H., & Safitri, I. (2022). The Effectiveness of Improving Student Mathematics Literacy Through The Use of The Facebook Application. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, 11(1), 683-693. <https://doi.org/http://dx.doi.org/10.24127/ajpm.v11i1.4743>
- Safitri, I., & Ansyari, R. (2024). The Calibration of Science Achievement Test Based on Integrated Islamic Curriculum. *8th International Conference on Education and Multimedia Technology (ICEMT)*, 329-336. <https://doi.org/10.1145/3678726.3678727>
- Safitri, I., Lestarani, D., Imtikhanah, R. D. N. W., Akbarini, N. R., Sari, M. W., Fitrah, M., & Hapsan, A. (2024). *TEORI PENGUKURAN DAN EVALUASI*. CV. Ruang Tentor.
- Safitri, I., Rosnawati, R., & Ansyari, R. (2024). Estimasi Kesalahan Pengukuran dalam Penilaian Sidang Skripsi: Generalizability Theory Analysis. *Afeksi: Jurnal Penelitian Dan Evaluasi Pendidikan*, 5(1), 162-168. <https://doi.org/https://doi.org/10.35672/afeksi.v5i1.220>
- Saipani, J., Harahap, R. D., & Chastanti, I. (2024). Analisis Kesesuaian Modul Ajar Biologi Kelas X IPA dengan Standar Kurikulum Merdeka di SMA Swasta Purnayuda. *Didaktika: Jurnal Kependidikan*, 13(2), 2419-2432. <https://ssed.or.id/contents/article/view/526%0Ahttps://ssed.or.id/contents/article/download/526/471>
- Setiawan, H. R. (2021). Management of learning evaluation activities. *National Seminar on Social Education Technology and Humanities*, 1(1), 507-511.
- Shah, A., Siregar, M. D. A., & Halimah, S. (2025). Evaluation of the Merdeka curriculum of Islamic Education lessons through the Context, Input, Process and Product (CIPP) model. *Journal MUDABBIR (Journal of Research and Education Studies)*, 5(1).
- Suherli, I. R., Pribadi, P., Arifin, S. A. N., & Kholikin, R. A. (2022). Application of derivatives in calculating maximum profit analysis in micro, small and medium enterprises. *My number: Journal of Scientific Mathematics*, 8(2), 28-35.
- Sumardi, E. (2022). *Training and support for teachers in the new curriculum*. Yogyakarta: Education Publishers.
- Suratno, J., Sari, D. P., & Bani, A. (2022). Curriculum and its Development Models. *Journal of Mathematics Teacher Education*, 2(1), 67-75.
- Taali, M., Darmawan, A., & Maduwinarti, A. (2023). Evaluation of the Merdeka Learning Curriculum Policies Implemented in Natural Schools in Indonesia. *International Journal of Social and Management Studies (IJOSMAS)*, 4(3), 117-127.
- Tuna, H., & Başdal, M. (2021). Curriculum evaluation of tourism undergraduate programs in Turkey: A CIPP model-based framework. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 29, 100324.

- Wilda, W. A. (2024). The development strategy of Merdeka Curriculum in strengthening character at the elementary school level. *Basicedu Journal*, 8(2), 1211-1223.
- Windayanti, W., Afranda, M., Agustina, R., Kase, E. B., Safar, M., & Mokodenseho, S. (2023). Problems of teachers in implementing the Merdeka Curriculum. *Journal on Education*, 6(1), 2056-2063.
- Wulandari, G. A. P. T., Putrayasa, I. B., & Martha, I. (2023). Effectiveness of diagnostic assessment in differentiated learning in Indonesian language lessons. *Nusantara Journal of Indonesian Education*, 3(3), 433-448.
- Zainil, M., Kenedi, A. K., Arwin, Sylvia, I., Khairat, F., & Oktavia, N. (2023). Training on STEM learning development in Merdeka Curriculum for elementary school teachers. *Journal of Community Service*, 6(2), 354-365.