

**IMPLEMENTASI ASESMEN AUTENTIK DALAM KURIKULUM
MERDEKA BELAJAR PADA PEMBELAJARAN MATEMATIKA DI SMP
KALIJOGO WATES**

SKRIPSI

Diajukan Untuk Memenuhi Sebagai Syarat Guna
Memperoleh Gelar Sarjana Pendidikan (S. Pd.)
Pada Program Studi Pendidikan Matematika



OLEH:

WARTA SUDARMAWAN

NPM: 19.1.01.05.0022

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Skripsi oleh:

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NPM: 19101050022

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SMP KALIJOGO WATES**

Telah disetujui untuk diajukan Kepada

Panitian Ujian/ Sidang Skripsi Program Studi Pendidikan Matematika
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KALIJOGO WATES**

Telah dipertahankan di depan Panitia Ujian/ Sidang Skripsi

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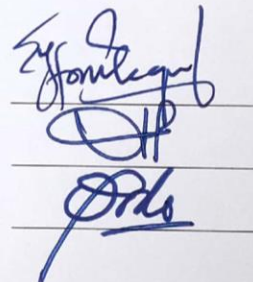
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Kediri, 7 Juli 2023

Yang membuat Pernyataan



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MOTTO DAN PERSEMBAHAN

rén de yìshēng méiyǒu yíwèi de kǔ méiyǒuyǒngyuǎn de tòng méiyǒubiānbúguò de kǎn
人 的 一 生 ， 没 有 一 味 的 苦 ， 没 有 永 远 的 痛 ， 没 有 边 不 过 的 坎 ，
méiyǒuguòbùqù de kùnnán
没 有 过 不 去 的 困 难 。

Dalam kehidupan manusia, tidak ada rasa kepahitan, tidak ada kesakitan yang abadi, tidak ada lubang yang tidak dapat dilangkahi, dan tidak ada kesulitan yang tidak bisa dilewati.

Saya persembahkan karya ini untuk:
Kedua orang tua saya, keluarga tercinta,
dan seluruh orang yang saya hormati
selama hidup ini

ABSTRAK

Warta Sudarmawan: Implementasi Asesmen Autentik dalam Kurikulum Merdeka Belajar pada Pembelajaran Matematika di SMP Kalijogo Wates.

Asesmen autentik dalam kurikulum Merdeka Belajar merupakan asesmen yang digunakan untuk mengukur capaian kompetensi peserta didik secara lebih tepat dan nyata dengan menyesuaikan jenis serta fungsi asesmen autentik yang meliputi asesmen pada akhir proses pembelajaran (*assessment of learning*), asesmen untuk proses pembelajaran (*assessment for learning*), dan asesmen sebagai proses pembelajaran (*assessment as learning*). Serta asesmen autentik dalam kurikulum Merdeka Belajar menggunakan pendekatan asesmen formatif dan sumatif. Kemudian, tujuan penelitian ini yaitu untuk mendeskripsikan implementasi asesmen autentik dalam kurikulum merdeka pada pembelajaran Matematika di SMP Kalijogo Wates serta hambatan yang ditemui dalam implementasi asesmen autentik kurikulum Merdeka Belajar pada pembelajaran Matematika di SMP Kalijogo Wates. Sumber dalam penelitian ini adalah seorang pengajar Matematika di SMP Kalijogo Wates. Penelitian ini merupakan penelitian deskriptif kualitatif. Instrumen penelitian yang digunakan dalam penelitian ini yaitu pedoman wawancara, lembar observasi, dan dokumen tertulis maupun gambar.

Hasil dari penelitian menunjukkan bahwa pengajar dalam mengimplementasikan asesmen autentik pada pembelajaran Matematika sudah berjalan dengan lancar. Pengajar menggunakan beragam teknik asesmen autentik berdasarkan jenis dan fungsinya dalam asesmen pada akhir proses pembelajaran, untuk proses pembelajaran, dan sebagai proses pembelajaran. Namun dalam proses pengimplementasian, pengajar masih menemukan berbagai hambatan. Hambatan yang ditemui diklasifikasikan menjadi tiga jenis hambatan yaitu hambatan pengajar, peserta didik, dan waktu. Meskipun masih ditemukan beragam hambatan, pengajar tetap berupaya untuk mengatasi hambatan-hambatan tersebut salah satunya pada hambatan waktu pengajar berupaya menyiapkan kebutuhan bahan ajar jauh hari sebelum digunakan.

Kata Kunci: asesmen autentik, pembelajaran Matematika, kurikulum merdeka

KATA PENGANTAR

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Skripsi ini diajukan untuk memenuhi persyaratan dalam menyelesaikan program Sarjana Pendidikan Matematika, Fakultas Ilmu Kesehatan dan Sains, Universitas Nusantara PGRI Kediri. Selain itu, skripsi ini ditulis dengan tujuan untuk mendeskripsikan implementasi asesmen autentik dan hambatan yang dihadapi pengajar dalam mengimplementasikan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika.

Peneliti memperoleh banyak dukungan, bantuan, dan saran selama proses menyelesaikan skripsi ini. Oleh karena itu, peneliti menyampaikan rasa terima kasih kepada pihak-pihak yang sudah ikut terlibat dalam penelitian dan penyusunan skripsi. Serta pada kesempatan ini diucapkan terima kasih dan penghargaan yang setulus-tulusnya kepada:

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Kediri, 7 Juni 2023

Peneliti

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ARTIKEL

The Implementation of Authentic Assessment in the "Merdeka Belajar" Curriculum in Mathematics Learning

Abstract: The Implementation of Authentic Assessment in the "Merdeka Belajar" Curriculum in Mathematics Learning. *This study aims to describe the implementation and obstacles of authentic assessment within the Merdeka Belajar curriculum in the context of mathematics learning at SMP Kalijogo Wates. The primary data source for this research is a mathematics teacher at SMP Kalijogo Wates. The study used a qualitative descriptive design and utilized interview guides, observation sheets, and written documents or visuals as research instruments. The research results indicate that the teacher has successfully implemented authentic assessment in mathematics learning. The teacher employs various authentic assessment techniques based on their types and functions, encompassing summative, formative, and process-oriented assessments. However, the teacher found several challenges during the implementation process. These obstacles can be categorized into three types: teacher-related barriers, student-related barriers, and time-related. Despite these impediments, the teacher perseveres in mitigating them, for instance, regarding time-related, the teacher ensures the preparation of instructional materials well in advance to overcome any potential difficulties.*

Keywords: authentic assessment, mathematic learning, independent learning curriculum

▪ INTRODUCTION

The world has entered the 21st century, known for the utilization and use of information technology. During this era, almost all activities can be done online (online) or offline (offline), including in education. Changes and improvements in the education sector can be seen in the development of the curriculum, aiming to enhance the quality of education. According to Hidayat, as cited in Achmad et al. (2022), Indonesia has undergone curriculum changes approximately ten times, including the curriculum plan in 1947, Curriculum 1952, 1964, 1968, 1975/1976, 1984, 1994, Competency-Based Curriculum 2002/2004 (Kurikulum Berbasis Kompetensi 2002/2004), Curriculum 2006 (Kurikulum Tingkat Satuan Pendidikan 2006 or KTSP), and Curriculum 2013, up to the current Independent Learning Curriculum (Kurikulum Merdeka Belajar or KUMER).

KUMER is designed not to replace existing programs but to improve the current system. KUMER utilizes authentic assessment as a means of evaluation. Assessment becomes a key component in education to determine the actions undertaken by educators in developing and enhancing students' abilities (Syarifuddin, 2020). Therefore, integrated assessment with learning (Kesianye, 2015). Authentic assessment emphasizes competency in attitudes, knowledge, and skills (Fitria, (2019); Wieth-Körprich and Bley, (2017); & Ghosh, (2017)). Authentic assessment not only focuses on what students have mastered but also on what students can do (Widodo and Katminingsih (2020) & Safitri et al. (2017)). Authentic assessment reviews the process and stages that students have gone through from the beginning to the end, considering learning outcomes against specific standards and criteria (Tyas (2020) & Winarso (2018)). Furthermore, according to Ilmiwan et al. (2019), authentic assessments have objectives to explain and inform the actual learning outcomes of students.

Authentic assessment has been used since implementation of the KTSP, but its execution has not been ideal. In line with Achmad et al. (2022), educators still encounter difficulties in terms of teaching methods and assessment processes methods, resulting in a limited understanding and adaptation of authentic assessment within the 2013 curriculum, and still contains ambiguities. Consistent with the research results by Ma'ruf (2019), educators have not fully grasped accurate assessment, leading to inadequate implementation. This is because the assessment criteria used by educators still focus primarily on knowledge aspects, and students are often assigned tasks without further engagement. Furthermore, Zaim (2013) and Sabri et al. (2019) emphasize that the key to accurately describing the attainment of student competencies lies in educators' understanding of authentic assessment.

Referring to Minister of Education, Culture, Research, and Technology Regulation Number 16 of 2022 (Permendikbudristek Nomor 16 Tahun, 2022)

(Peraturan Pemerintah RI, 2022) on the standard process and Minister of Education, Culture, Research, and Technology Regulation No. 21 of 2022 (Permendikbudristek Nomor 21 Tahun, 2022) (Peraturan Pemerintah RI, 2022) on the standard of authentic assessment in the KUMER, it emphasizes the process and stages involved in achieving learning outcomes. Therefore, authentic assessment in the Merdeka Belajar curriculum utilizes authentic assessment based on assessment at the end, for, and as a learning process, combining formative and summative assessment approaches. In agreement with Lutfiana (2022), the authentic assessment in the KUMER is based on assessment at the end of the learning process, assessment for the learning process, and assessment as the learning process, employing formative and summative assessment strategies. Formative assessment is conducted throughout the process (as and for) of learning and serves to monitor students' progress, while summative assessment is conducted at the end of the process to determine learning achievements (Dagdag and Dagdag, 2020). Based on Kartowagiran et al. (2019), authentic assessment is the appropriate approach for using formative and summative assessment in the assessment as, for, and at the end of the learning process.

Other research conducted by Aini et al. (2022) aimed to describe the implementation of authentic assessment in Mandarin language writing skills, the obstacles encountered, and the efforts to overcome them. The research findings showed that authentic assessment was conducted using techniques that assess attitudes, knowledge, and skills. The identified obstacles included issues related to teachers/students, limited time, and the development of assessment instruments. Furthermore, research conducted by Achmad et al. (2022) describes the implementation of authentic assessment in Islamic Education in primary schools and the challenges faced. The research findings indicated that the implementation of authentic assessment still relied on the 2013 curriculum, with assessment techniques covering attitudes, knowledge, and skills. The identified obstacles included teachers' difficulties in determining appropriate assessment instruments and time constraints.

The research conducted by different researchers is different in terms of the focus on the implementation of authentic assessment in Mathematics, which specifically aligned with the implementation of the KUMER, as well as the obstacles encountered by teachers in implementing authentic assessment in Mathematics within the KUMER.

▪ **METHOD**

Approach and research design

The approach used in this research is qualitative. Rahayu (2022) states that qualitative research collects data through natural steps to interpret and analyze phenomena. This research aims to describe the implementation of authentic

assessment in the KUMER in mathematics learning. Additionally, it aims to describe the obstacles educators face in implementing authentic assessment in the Merdeka Belajar curriculum in mathematics learning at SMP Kalijogo Wates. The presence of the researcher is essential and cannot be replaced. The researcher acts as the planner of activities, data collection executor, data analyzer, and data interpreter.

Stages of Research

The research is divided into four stages: pre-fieldwork, fieldwork, data analysis, and report writing. The pre-fieldwork stage aims to determine the research focus involving field observations. The researcher observed their participation in the "Kampus Mengajar IV" program at SMP Kalijogo Wates. The fieldwork stage includes data collection in the field. The research was conducted over two sessions, and the data obtained included interview results with a Mathematics teacher identified as Delan.

Additionally, classroom observations and analysis of teaching materials were conducted. The data analysis stage involved using interview guidelines, observation sheets, and document analysis. The collected data were then organized according to the research context, and the validity of the data was checked based on the interview, observation, and data analysis results. The report writing stage involved compiling the research report after gathering all the data.

Place and Time

The research was conducted at SMP Kalijogo Wates, Jalan Raya Sidomulyo, Winong, Sidomulyo, Wates District, Kediri Regency. The research activities were carried out in January 2023.

Data Source

The data sources in this research were divided into primary and secondary data. Primary data were obtained through interviews and observations. Secondary data were obtained from existing sources such as photos, documents, data, and relevant previous research. The source in this research was a Mathematics teacher at SMP Kalijogo Wates.

Data Collection Procedure

There are three data collection procedures: interviews, observations, and document analysis. Interviews were conducted to gather broader information related to implementing authentic assessment in the context of the KUMER in mathematics learning, including the techniques and steps used and the obstacle faced. Observations aimed to gather facts and realities regarding the implementation and obstacles of authentic assessment in the KUMER in mathematics learning. Additionally, observations were conducted to document the research process inside the classroom. Furthermore, document analysis involved

qualitative documents related to the research, such as teaching modules prepared by the teacher.

Data Analysis Technique

The data analysis technique was carried out concurrently with data collection. The data collection process began with interviews with the research subject, Delan, followed by classroom observations and document analysis. The next step involved data reduction by categorizing and refining the data and discarding unnecessary information. Subsequently, the data were presented to facilitate concluding and determining the appropriate follow-up actions. All the data were organized and understood through this process to determine the next steps. Finally, conclusions were drawn by analyzing the qualitative data to uncover the realities in the field regarding implementing authentic assessment in the context of the KUMER in mathematics learning. The results from the data analysis were then used to draw conclusions based on each research question.

Determination of The Validity of The Results

The determination of the validity of the results was done through data triangulation. This involved comparing data from interviews, observations, and document analysis. The researcher also compared the information obtained from different sources and cross-checked the interview, observation, and document analysis results. Furthermore, the researcher verified the data and sought the approval of the research subject regarding the obtained results. A description of the implementation of authentic assessment in the context of the KUMER in mathematics learning at SMP Kalijogo Wates was generated through these steps.

RESULT AND DISCUSSION

The results of this research are broadly divided into two main parts: the implementation of authentic assessment in the context of the KUMER in mathematics learning and the obstacles to the implementation of authentic assessment in the context of the KUMER in mathematics learning. Additionally, there are efforts made to overcome these barriers. The following are Figure 1, which presents a table of research results.

F	AAI	AOL			AFL						ASL				AOAA			Obstacles			Efforts				
		SEM	SM	SEY	AD	AS		KA		SA		s	t	p	d	l	a	c	dar	Teacher	Students	Time	Teacher	Students	Time
						as	asb	ja	sa	p	wa	o	w	ot	ta	pfa	pfa	p							
WA	√	√	√	√	√	√	√	√	√	-	√	-	√	√	√	√	√	√	√	D1	D2	D3	D4	D5	D6
D	√	-	-	-	√	√	√	√	-	-	√	-	√	√	√	√	√	√	√	-	-	-	-	-	-
AD	√	-	-	-	√	√	√	√	-	-	√	-	√	√	√	√	√	√	√	-	-	-	-	-	-

D1: Difficulty in structuring teaching modules and conditioning classes

D2: Rowdy, dishonest / cheating, disturbing friends when carrying out formative tests, not concentrating and passive, and not completing tasks properly.

D3: Time constraints in preparing teaching materials, analyzing results, discussing task results, difficulty processing task results at each meeting, and not using all authentic assessment techniques..

D4: Develop teaching tools early, utilize resource sharing, form special teams, and provide strictness and sanctions.

D5: Give more attention to students, advise students who cheat, provide enrichment questions, make agreements at the beginning of learning, give directions to do questions well, and provide remedial.

D6: As well as efforts to overcome obstacles from teachers and students, process results between working hours, and set aside time outside working hours.

Figure 1. Table of Research Results

Information:					
F	: Focus	KA	: Knowledge Assessment	ta	: Task Assessment
AAI	: Authentic Assessment Implementation	AK	: Skill Assessment	pfa	: Performance Assessment
AOL	: Assessment of Learning	WA/wa	: Interview Assessment	pfa	: Portfolio Assessment
AFL	: Assessment for Learning	OA/oa	: Observation Assessment	tss	: Teacher self-Assessment
ASL	: Assessment as Learning	ass	: At the Start of the Semester	ds	: Determining Standards
AOAA	: Steps of Authentic Assessment	asb	: At the Start of the Subchapter	iat	: Identifying Authentic Tasks
SEM	: Summative at the End of Material	ja	: Jurnal Assessment	cac	: Creating Assessment Criteria
SM	: Summative in the Midterm	sa	: Self-Assessment	dar	: Developing an Assessment Rubric
SEY	: summative at the End of the Year	pa	: Peer-Assessment	D	: Description
AD	: Diagnostic Assessment	wt	: Written Test		
AS	: Attitude Assessment	ot	: Oral Test		

Figure 2. Table Description of Research Results

1. Implementation of Authentic Assessment in KUMER for Mathematics Learning

Mathematics teacher, Delan, has implemented authentic assessment in the context of the KUMER. The assessment is based on end-of-process assessment, assessment for the learning process, and assessment as a learning process. Delan utilizes both formative and summative assessment strategies. The implementation of authentic assessment is integrated into the teaching and learning activities (Barrio et al., 2015). The assessment procedures and techniques used in this study refer to the guidelines provided in the book "Panduan Pembelajaran dan Asesmen" (Anggraena et al., 2022) as well as the Learning Outcomes (Capaian Pembelajaran or CP) in "Keputusan BSKAP No. 33 Th. 2022" (Badan Standar Kurikulum dan Asesmen Pendidikan, 2022). The teacher utilizes various assessment techniques and instruments according to the needs to measure students' learning outcomes (Ikhwan, 2018). The component of the teaching module includes general information, core components (Kompetensi Inti), lesson plans (RPP), attachments (lampiran), and the assessment techniques used (teknik asesmen yang digunakan). Although there are criteria within the teaching module that are not mentioned, such as enrichment (pengayaan), remedial, teacher's reading materials (bahan bacaan pengajar), meaningful understanding (pemahaman bermakna), and several assessment techniques used.

1. Assessment at The End of The Learning Process

Assessment at the end of the learning process is intended for evaluation and determining the final learning outcomes at the end of the learning process using a summative assessment approach (Sufyadi et al., 2021). Mathematics teacher Delan has yet to implement authentic assessment techniques in the assessment at the end of the learning process due to the timing of the research. During the research period, teacher Delan had just started a new topic, so he had not conducted all the summative assessments yet.

2. Assessment of the Learning Process

Assessment for the learning process is intended to improve the learning process using a formative assessment approach (Sufyadi et al., 2021). The role of the teacher in formative assessment for the learning process is to act as the main controller of the assessment activities (Anisah, 2021). The assessment for the

learning process implemented by the teacher consists of a diagnostic assessment, attitude, knowledge, and skills assessment.

a. Diagnostic Assessment

A diagnostic assessment determines students' initial weaknesses, competencies, and strengths to tailor learning to their conditions and competencies (DIKDAS, 2020). In line with Okoye (2014), one of the advantages of assessment is to cater to the diverse needs of students according to their learning styles, which helps teachers plan and improve the learning process. The diagnostic assessment provides an overview of the actual development of each student (Csapó and Molnár, 2019). The teacher conducts a diagnostic assessment in the form of a diagnostic test at the start of a new topic, specifically focusing on cognitive diagnostics. The provided questions are related to prerequisite arithmetic topics, such as operations with whole numbers and fractions. Here is an example of such a question:

When you were in elementary school, you have learned various forms of fractions. Convert the algebraic form below!

No	Proper Fraction	Improper Fraction	Decimal Fraction	Percentage
1a	1/2			
1b		5 1/3		

The teacher provides follow-up based on the diagnostic test results. If the students score above 75, they can proceed directly to the next topic. However, the teacher will provide guidance if the scores are below 75. The diagnostic assessment results indicate that all students meet the prerequisite skills to move on to the next topic.

b. Attitude Assessment

According to Kunandar (2013), an attitude competency assessment evaluates students' attitude competencies conducted by the teacher. Attitude competencies include social and spiritual attitudes that can be observed during learning activities (Safitri et al., 2017). The teacher uses assessment journals, self-assessment, and peer assessment techniques to measure students' attitude competencies. Assessment journals are records of the teacher's observations of students' strengths and weaknesses regarding their attitudes and behaviours during and outside the classroom (Kunandar, 2013). The teacher uses an integrated assessment journal alongside the teaching and learning process in the classroom to assess students' behaviour and attitudes during their participation in classroom activities. The final results of the assessment journal are used for evaluation purposes to determine the appropriate follow-up actions for the students.

The teacher implements integrated self-assessment and peer assessment as part of the assessment as learning process because these assessments involve criteria and are considered part of the learning process (Yan and Boud, 2021). The teacher does not use interview techniques because self-assessment already encompasses the essence of an interview, and self-assessment is generally used to gather written information about the students. Additionally, the teacher does not use observation techniques because the assessment journal already includes the aspects of attitude competency assessment, and the process itself involves observation. Therefore, the assessment journal serves as a representative of the observation technique.

c. Knowledge Assessment

Knowledge assessment measures the mastery or achievement of students' knowledge, including remembering, understanding, applying, analyzing, synthesizing, and evaluating (Kunandar, 2013). The teacher utilizes knowledge assessment techniques such as written tests in the form of formative assessments with essay questions and task assessments. According to Majid (2018), a written test is a test that involves written responses, both in the questions and answers. The formative function of a written test is to be conducted continuously throughout the learning process, planned periodically, covering all the taught material, measuring the learning-teaching process, and used for improvement and refinement of the learning-teaching process (remedial purposes). The essay questions provided by the teacher require students to comprehend, recall, organize their thoughts, and express their ideas using their language (Kunandar, 2013). For example, the teacher provides the following question:

A vegetable vendor invested Rp1.500.000,00 to run his business. If all the vegetables were sold on that day and he received Rp2.000.000,00, what percentage of profit he obtained on that day...

The teacher evaluates the students' written test results based on identifying problems in the questions, determining the problem-solving formulas, and concluding the results of problem-solving. Task assessment aims to improve students' problem-solving skills and enhance their mastery and understanding by giving tasks that involve solving real-life problems (Widodo and Katminingsih, 2020). The task given by the teacher is to instruct the students to investigate the reading material in the workbook and describe the results related to social arithmetic problems such as buying price, selling price, profit and loss, and discounts. An example of the task given by the teacher is as follows:

Find information related to these quantities and write down the results of your investigation below:

The selling price is...

In addition, the teacher also provided the following essay question :

A bicycle merchant purchased 20 bicycles for Rp1.500.000 each. If the merchant intends to make a profit of Rp10.000.000 for all the bicycles, what will be the selling price of a bicycle?

The teacher implemented all the techniques of authentic assessment for the knowledge aspect except for the oral test technique, as the methods used were tailored to the data needs of the teacher. Therefore, the teacher did not use the oral test due to time efficiency and data requirements.

d. Skills Assessment

Skills assessment involves using performance assessments that require students to demonstrate and apply their knowledge in contexts aligned with specific criteria (Kunandar, 2013). In line with Afifah (2022), performance assessment demands that students demonstrate competence through projects, practical tests, and portfolios. Additionally, tasks that generate answers based on theory can be given to illustrate students' knowledge and skills (Darma et al., 2018). The teacher utilizes performance assessment techniques and portfolios to evaluate students' skills. Performance assessment can be understood as monitoring the activities of students that have taken place (Widodo and Katminingsih 2020). The teacher implements integrated performance assessments with task assessments and written tests to save time and collect data efficiently. As mentioned by Sufyadi S et al. (2021), implementing assessment can encompass attitude, knowledge, and skills. By providing formative tasks and tests, it represents the use of performance tasks in classroom learning (Yuniati, (2011); & Dagdag and Dagdag, (2020)). Additionally, tasks and their criteria are the most crucial part of performance assessment (Koh 2017).

A portfolio assessment, as described by Supardi (2015) & Prastikawati (2018), is a collection of selected and organized student work obtained from the learning process over a specific period. The teacher implements portfolio assessment by gathering all the students' work. The teacher then uses the checked work to consider learning outcomes and as physical evidence of the student's tasks. The teacher does not conduct project-based techniques due to introducing new material and time constraints for the research.

3. Assessment As a Learning Process

Assessment as a learning process refers to the assessment used for reflecting on the learning process and serves as a formative assessment (Sufyadi et al., 2021). In assessment as a learning process, students play an active role as the main actors and become the best assessors of their learning through self-assessment. Involving students in the assessment process is crucial for assessment as a learning process (Yan and Boud, 2021). The teacher utilizes self-assessment, peer assessment, and teacher self-assessment to implement authentic assessment techniques in assessment as a learning process. In line with Granberg et al (2021), teachers can implement self-assessment and peer assessment to make students active participants in formative assessment. Self-assessment is an assessment conducted by students to evaluate themselves (Widodo, 2009). Students are asked to fill out self-assessment sheets to assess themselves on the learning process they have undertaken. Self-assessment is to foster self-confidence, promote self-reflection to identify strengths and weaknesses and encourage honesty and objectivity in the assessment process (Darma et al., 2018). Teacher self-assessment is conducted simultaneously with student self-assessment, where teachers fill out self-assessment sheets to reflect on and evaluate their teaching activities.

Peer assessment asks students to assess each other individually or in groups, focusing on the relevant competencies achieved (Afifah, 2022). The teacher implements peer assessment by having students examine their peers' work and report the scores obtained from assessing their peers' work. Engaging in peer assessment fosters objective behaviour and serves as an informal assessment method within the assessment as a learning process (Fatmawati and Nendi, 2022). Additionally, peer assessment aims to cultivate and encourage honesty, responsibility, and mutual respect among students. Research by Lutfiana (2022) supports using formative assessment techniques, such as self-assessment and peer assessment, in implementing assessment as a learning process.

4. Steps of Authentic Assessment

Dilan, the teacher, utilizes the steps of authentic assessment, which include determining standards, identifying authentic tasks, creating assessment criteria, and developing an assessment rubric (Aini et al., 2022). Research by Ayuni et al. (2022) study on Classroom Anecdotes in Grade X of Senior High School employs the following steps: determining standards, selecting an assessment model, establishing criteria, creating a rubric, disseminating information, conducting the assessment, and assigning grades and scores.

The teacher determines the standards of authentic assessment in the form of Learning Objectives (Tujuan Pembelajaran or TP) that refer to Learning Outcomes (Capaian Pembelajaran or CP) outlined in “Keputusan BSKAP No. 33 Th. 2022” (2022). The teacher utilizes CP 2 (Applying arithmetic operations on real numbers

and providing estimates in problem-solving). Based on CP, the teacher formulates the Learning Objectives directly (Anggraena et al. 2022). Subsequently, using the Learning Objectives as a foundation, the teacher determines contextualized authentic tasks (Kunandar, 2013). Authentic tasks refer to real-world tasks the teacher assigns to measure student achievement (Nurgiyantoro and Suyat, 2011). For example, Authentic tasks can take the form of integrated performance-based questions or assessments.

Mr Rudi bought an office chair for B rupiah. A month later, he sold the chair back to Mr Rohim for Rp325.000. What was the purchase price of the office chair if he made a profit of Rp81.250?

Assessment criteria in the KUMER are known as Criteria for Achievement of Learning Objectives (Kriteria Ketuntasan Tujuan Pembelajaran or KKTP). Teachers determine the KKTP based on the Learning Objectives (TP) that have been established, using an interval value rubric format (Sufyadi et al., 2021). An example of KKTP can be seen in Table 1 below.

B.7.9 Performing operations related to buying and selling (Selling Price, Buying Price, Profit, Loss, and Discount).

Criteria for Achievement	Need Guidance (0 – 75)	Adequate (76 – 82)	Good (83 – 90)	Very Good (91 – 100)
Performing operations related to buying and selling (Selling Price, Buying Price, Profit, Loss, and Discount).	The students are not yet able to perform operations related to buying and selling (Selling Price, Buying Price, Profit, Loss, and Discount)	The students can adequately perform some operations related to buying and selling (Selling Price, Loss, and Discount), but some things still need to be corrected.	The students are able to perform some operations related to buying and selling (Selling Price, Buying Price, Profit, Loss, and Discount) adequately, but there are still a few errors.	The students can perform operations related to buying and selling (Selling Price, Buying Price, Profit, Loss, and Discount) accurately and correctly.

Table 1. The Example of KKTP Table

Then, the teacher creates an adapted assessment rubric based on the specific needs. For example, in the diagnostic assessment, the teacher utilizes a score range rubric. Meanwhile, for written tests and assignments, the teacher employs a scoring table rubric. For instance, the assessment rubric for the question mentioned above can be seen in Table 2 below.

Criteria	Skor
<ol style="list-style-type: none"> 1. The students are able to accurately and correctly identify the problems in the given questions. 2. The students are able to accurately and correctly determine the formulas or equations. 3. The students are able to provide accurate and correct conclusions. 	4
<ol style="list-style-type: none"> 1. The students are adequately able to identify the problems in the given questions accurately and correctly. 2. The students are partially able to determine the formulas correctly and accurately. 3. The students still make errors in drawing conclusions, or they fail to include a conclusion. 	3
<ol style="list-style-type: none"> 1. The students still make errors in identifying the problems in the given questions. 2. The students still make errors in determining the formulas. 3. The students include a conclusion; however, there are still errors in determining the conclusion. 	2
<ol style="list-style-type: none"> 1. The students do not include the identification of the problems in the given questions. 2. The students make mistakes in determining the formulas. 3. The students do not include a conclusion. 	1

Table 2. Assessment Rubric Table

5. Obstacles of Authentic Assessment in the KUMER in Mathematics Learning

The implementation of assessment does not always go smoothly, as various obstacles are encountered. Teacher Dilan encountered several diverse obstacles. Referring to the research by Imamuddin (2022), the obstacles encountered in implementing authentic assessment include the design of instruments and reporting the results of authentic assessment implementation. On the other hand, the research by Ayuni et al. (2022) found obstacles from both internal and external aspects. Internal obstacles include limited time for conducting authentic assessment, resulting in suboptimal assessment processes, while external obstacles include the need for more motivation and self-confidence among students. In contrast to previous researchers, Teacher Dilan encountered obstacles in implementing

authentic assessment, categorized into obstacles from the teacher, students, and time constraints. However, the teacher also made efforts to overcome the obstacles.

The obstacles faced by Teacher Dilan are related to the implementation of authentic assessment. The teacher finds it challenging to develop teaching materials, especially for tasks and assessment rubrics. This is because various assessment techniques are used, and each requires different assignment guidelines. As a result, different assessment rubrics are needed. This aligns with the findings of previous researchers, indicating that the need for more understanding of sequencing and instrument usage contributes to the obstacles in implementing authentic assessment (Ma'ruf, 2019). Additionally, the teacher also faces difficulties in managing the classroom. To overcome these challenges, the teacher takes several measures. These include early preparation of teaching materials, utilizing online resources and teaching platforms to gather teaching materials, forming a dedicated team to facilitate the development of teaching materials, and imposing disciplinary actions such as grade deductions for students who disregard the teacher's instructions.

The teacher encounters various obstacles from the students, including disruptive and non-conductive behavior during learning activities, dishonesty or cheating when completing assignments, disturbance of classmates during formative tests because they feel they have finished the test, lack of attention to the material, and passive behavior. Additionally, some students do not complete their tasks properly or neatly, which hinders the teacher from analyzing their work. The teacher acknowledges that student-related obstacles are always present. To address these obstacles, the teacher takes several measures. Firstly, providing extra attention to disruptive and unfocused students by giving guidance, encouragement, and motivation. Secondly, address students who are dishonest or cheat by providing warnings, and if ignored, the teacher will note their dishonest behavior in the progress journal. Thirdly, providing enrichment questions directly to students who need them by writing them on the board. Fourthly, motivating and inspiring students to participate more actively in learning activities. Additionally, sometimes the teacher establishes agreements at the lesson's beginning, stating that student violations will affect their grades. Fifthly, the teacher guides students who must complete their tasks properly or neatly to minimize errors during checking and optimize their scoring. The teacher mentions that students who do not meet the assessment criteria will be given remedial measures.

Time constraint is a limitations the teacher faces in preparing teaching materials and analyzing students' work. The teacher states that the assessment instruments in the Merdeka Belajar curriculum are very detailed. This aligns with the research by Ma'ruf (2019), which also highlighted time limitations as a common constraint due to the diverse categories that need to be assessed. The teacher has not been able to include enrichment questions in the teaching module due to limited time.

Additionally, both the teacher and students face time constraints in discussing assignment results, resulting in incomplete discussions. Moreover, the teacher expresses difficulty in processing students' work scores during each session due to time limitations and a packed teaching schedule. Not all assessment techniques in the curriculum are fully utilized to save time. Efforts to address time constraints are similar to those mentioned earlier, including efforts from both the teacher and students. Furthermore, the teacher and students agree to discuss results later to overcome time limitations. To overcome the challenge of analyzing students' work, the teacher processes the data during empty teaching slots. The teacher also allocates time outside of working hours to meet the targets of preparing teaching materials and recording students' grades.

▪ **CONCLUSION**

Implementasi of authentic assessment in the Merdeka Belajar curriculum for the Mathematics subject at SMP Kalijogo Wates is carried out based on the types and functions of assessment: at the end, for, and as a learning process. The teacher only implements authentic assessment for the learning process and as a learning process. The authentic assessment techniques used for the learning process include self-assessment, peer assessment, and assessment journals for the attitude aspect. The knowledge aspect is assessed through assignment assessments and written tests. Performance techniques and portfolios are used for assessing skills. In addition, the teacher also uses diagnostic assessment in the cognitive diagnostic domain. While authentic assessment techniques used in assessment as a learning process are student self-assessment, peer assessment, and teacher self-assessment.

The obstacles the teacher encounters in implementing authentic assessment in the Merdeka Belajar curriculum for the Mathematics subject at SMP Kalijogo Wates are divided into three categories: obstacles from the teacher, obstacles from the students, and time constraints. The efforts made by the teacher to overcome these obstacles in the implementation of authentic assessment in the Merdeka Belajar curriculum for the Mathematics subject at SMP Kalijogo Wates are tailored to the nature of each obstacle. For example, the teacher prepares teaching materials well in advance to overcome the time constraint in preparing instructional instruments.

BAB I

PENDAHULUAN

A. Latar Belakang

Saat ini dunia telah memasuki abad ke 21 yang merupakan masa yang dikenal dengan pemanfaatan dan penggunaan teknologi informasi. Pada masa ini hampir dari seluruh kegiatan dapat dilakukan secara dalam jaringan (daring) maupun luar jaringan (luring). Perubahan ini berdampak pada berbagai sektor, salah satunya yaitu dunia pendidikan. Dengan beragam hambatan yang dialami, pendidikan harus mampu untuk dapat menyesuaikan dengan kondisi untuk dapat mengimbangi serta mengikuti segala perubahan yang terjadi dari segi perkembangan ilmu pengetahuan agar peserta didik dapat menggunakannya sebagai bekal kehidupan kelak.

Perubahan serta penyempurnaan dari sektor pendidikan dapat terlihat pada pengembangan kurikulum pada pendidikan. Perubahan kurikulum dilakukan agar dapat meningkatkan kualitas dari pendidikan. Kurikulum senantiasa mengalami perubahan dan pembaharuan dalam setiap periode. Menurut Hidayat dalam Achmad, et al. (2022), bahwa Indonesia telah mengalami perubahan kurikulum sekitar sepuluh kali, diantaranya rencana pelajaran pada tahun 1947, Kurikulum 1952, 1964, 1968, 1975/1976, 1984, 1994, kurikulum berbasis kompetensi 2002/2004, Kurikulum Tingkat Satuan Pendidikan 2006, dan kurikulum 2013, hingga saat ini kurikulum Merdeka Belajar.

Kurikulum Merdeka Belajar dirancang bukan untuk menggantikan program yang telah berjalan, namun digunakan untuk memberi perbaikan sistem yang berjalan. Dalam Maulana, et al. (2021) bahwa program Merdeka Belajar yang ditawarkan oleh Kemendikbud meliputi Rencana Pelaksanaan Pembelajaran (RPP) satu lembar, sistem zonasi yang fleksibel, penggantian Ujian Nasional (UN) menjadi Asesmen Kompetensi Minimum (AKM), penggantian Ujian Sekolah Berstandar Nasional (USBN) menjadi Asesmen Berkelanjutan. Asesmen menjadi pokok utama dalam pendidikan guna menjadi penentu terhadap tindakan yang dilaksanakan oleh pengajar untuk mengembangkan dan meningkatkan kemampuan peserta didik (Syarifuddin, 2020), sehingga asesmen terpadu dengan pembelajaran (Kesianye, 2015). Kurikulum Merdeka Belajar menggunakan bentuk asesmen autentik sebagai penilaian. Penilaian autentik merupakan suatu penilaian yang menekankan kompetensi sikap, kompetensi pengetahuan, dan kompetensi keterampilan ((Fitria, 2019); (Wiethe-Korprich & Bley, 2017); & (Ghosh, 2017)). Penilaian autentik tidak hanya berfokus pada apa yang dikuasai peserta didik, tetapi juga berfokus pada apa yang dapat dilakukan oleh peserta didik (Safitri, Sari, & Wahyuni, 2017). Hal tersebut selaras dengan pendapat Suryo dan Yuni (2020) bahwa penilaian autentik menerapkan apa yang telah dipelajari peserta didik dalam situasi nyata. Asesmen autentik sangat relevan dalam pembelajaran Matematika. Kegiatan penilaian pada pembelajaran Matematika secara autentik dapat memberi informasi yang luas terkait capaian hasil belajar peserta didik lebih rinci. Selain itu pada pembelajaran Matematika memuat ketiga

aspek penilaian dalam penilaian autentik, yaitu aspek sikap, pengetahuan, dan keterampilan.

Peneliti memilih SMP Kalijogo Wates sebagai objek penelitian karena peneliti telah melaksanakan observasi ketika mengikuti kegiatan Kampus Mengajar IV. Selain itu, untuk mewujudkan implementasi dari Kurikulum Merdeka Belajar, seluruh guru Matematika telah mengikuti sosialisasi dan pelatihan terkait implementasi kurikulum Merdeka Belajar. Berdasarkan hasil observasi di SMP Kalijogo Wates dapat diketahui bahwa sekolah tersebut telah menerapkan asesmen autentik pada kurikulum Merdeka Belajar. Asesmen autentik telah digunakan sejak Kurikulum Tingkat Satuan Pendidikan (KTSP) tetapi pelaksanaannya belum ideal. Selaras dengan hal tersebut Achmad et al. (2022) mengemukakan bahwa para pengajar masih menemui kesulitan mengenai metode pembelajaran serta proses penilaian, sehingga pemahaman asesmen autentik hanya sekedar mengerti dan menyesuaikan dengan kurikulum 2013 yang di dalamnya masih terdapat kerancuan. Sejalan dengan hasil penelitian Ma'ruf (2019) bahwa pengajar belum sepenuhnya memahami asesmen autentik sehingga dalam pelaksanaannya belum cukup benar dan salah, hal tersebut dikarenakan kriteria penilaian yang dilakukan pendidik masih berpusat pada aspek pengetahuan, selanjutnya peserta didik hanya diberi tugas lalu mengumpulkannya. Kemudian Zaim (2013) & Sabri, et al. (2019) mengemukakan kunci untuk menggambarkan atas keterangan ketercapaian kompetensi peserta didik adalah pemahaman pengajar terhadap asesmen autentik.

Pengajar Matematika di SMP Kalijogo Wates dalam mengimplementasikan asesmen autentik belum cukup melaksanakan asesmen autentik secara benar dan tepat. Karena kriteria penilaian yang dilakukan pengajar tersebut masih berpusat pada aspek pengetahuan, peserta didik hanya diberi tugas lalu mengumpulkan tugas tersebut. Pada kenyataannya asesmen autentik dalam kurikulum Merdeka Belajar mengedepankan proses dan tahapan yang dilalui oleh peserta didik dalam mencapai capaian pembelajaran. Berdasarkan uraian tersebut, pelaksanaan asesmen autentik yang dilakukan oleh pengajar Matematika di SMP Kalijogo Wates perlu untuk diteliti. Penelitian ini bertujuan untuk mengetahui bagaimana pengajar melaksanakan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika, serta hambatan pelaksanaan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran matematika yang dialami oleh pengajar SMP Kalijogo Wates.

B. Pertanyaan Penelitian

Berdasarkan pertanyaan penelitian tersebut, maka pertanyaan penelitian dalam penelitian ini adalah sebagai berikut.

1. Bagaimana pelaksanaan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika di SMP Kalijogo Wates?
2. Apa hambatan yang dialami pengajar saat melaksanakan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika di SMP Kalijogo Wates?

C. Tujuan Penelitian

Berdasarkan pertanyaan penelitian di atas, maka penelitian ini bertujuan sebagai berikut.

1. Mendeskripsikan pelaksanaan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika di SMP Kalijogo Wates.
2. Mendeskripsikan hambatan yang dialami pengajar saat melaksanakan asesmen autentik dalam kurikulum Merdeka Belajar pada pembelajaran Matematika di SMP Kalijogo Wates.

D. Manfaat Penelitian

Manfaat penelitian dalam penelitian ini dibagi menjadi manfaat teoritis dan manfaat praktis.

1. Manfaat Teoritis

Secara teoritis, hasil dari penelitian ini diharapkan dapat digunakan sebagai bahan acuan dan ilmu pengetahuan dalam mengembangkan asesmen autentik pada pembelajaran Matematika.

2. Manfaat Praktis

Penelitian ini secara praktis diharapkan dapat memberi manfaat sebagai berikut.

a. Bagi Guru

Hasil dari penelitian ini diharapkan dapat menjadi bahan kajian bagi guru Matematika untuk dapat meningkatkan kualitas pembelajaran Matematika khususnya pada penilaian pembelajaran.

b. Bagi Sekolah

Hasil dari penelitian ini diharapkan dapat menjadi bahan kajian bagi guru Matematika untuk dapat meningkatkan kualitas pembelajaran Matematika khususnya asesmen autentik di SMP Kalijogo Wates.

c. Bagi Peneliti Lain

Hasil dari penelitian ini diharapkan dapat menjadi bahan rujukan pada penelitian selanjutnya yang sejenis.

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