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Teachers' perceptions and practices in the implementation of the merdeka curriculum: A comparative analysis across educational level

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Abstract

Implementing the Merdeka Curriculum requires teachers not only to understand the concepts but also to translate them into authentic learning practices. This study aims to analyze the gap between teachers' perceptions and practices at the elementary, junior high, and high school levels in applying the principles of the Merdeka Curriculum. Using an explanatory mixed-methods design, data were obtained through perception questionnaires and video observations of learning to map teachers' understanding and validate their instructional actions. The results show that teachers at all levels gave high ratings to their understanding of PjBL, differentiation, HOTS, and authentic assessment. However, classroom observations revealed that implementation was still partial: PjBL tended to be short assignments, differentiation was almost invisible, authentic assessment did not yet use systematic

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instruments, and HOTS development was dominated by low-level analytical activities. Senior high schools showed the most stable implementation, while elementary schools were in the early stages of adaptation. These findings confirm the existence of a consistent perception–practice gap at all levels. Overall, this study emphasizes the importance of more practical pedagogical training and sustained support for schools so that the implementation of the Merdeka Curriculum can progress more deeply and evenly across contexts.

Keywords: Curriculum; Teacher Perception; Learning Practices.

1. INTRODUCTION

The Merdeka Curriculum was designed to meet the learning demands of the 21st century, where students must be active, independent, and capable of higher-order thinking. It aims to equip students with complex competencies—such as creativity, collaboration, and digital literacy—in response to global shifts. The curriculum rests on five main pillars: student-centered learning, differentiated learning, Project-Based Learning (PBL), strengthening Higher Order Thinking Skills (HOTS), and authentic assessment. These principles foster meaningful, contextually grounded learning experiences for students and align with learning theories that recognize learners' active role.

The Merdeka Curriculum is built upon five interconnected core learning principles. First, student-centered learning makes students the main agents of their own education, with teachers guiding and supporting independent learning. This reflects constructivist theory, which holds that knowledge is constructed through active engagement with the environment (Fosnot, 2005). Second, differentiated learning allows each student to learn in ways that best suit their needs, interests, and abilities, helping all students reach shared goals. Research indicates that differentiation boosts motivation and learning effectiveness (Tomlinson, 2016). Third, Project-Based Learning (PjBL) invites students to tackle real-life problems through hands-on projects that cultivate creativity, collaboration, and critical thinking. This method has proven to enhance engagement and promote deep conceptual understanding (Kokotsaki et al., 2016). Fourth, strengthening HOTS aims to foster analytical, evaluative, and creative skills, as articulated in the revised Bloom's taxonomy (Krathwohl, 2002). In Indonesia, challenges in implementing HOTS persist, especially in designing lessons that demand genuine higher-order thinking. Fifth, authentic assessment gauges student competence through real-world tasks like projects, portfolios, and formative assessments, offering a fuller view of student abilities than traditional tests (Gulikers et al., 2004). Utilizing rubrics and formative feedback enables teachers to track student progress continuously and provide tailored interventions.

Overall, the Merdeka Curriculum not only introduces structural changes but also promotes a fundamental shift in learning paradigms. The role of teachers shifts from merely delivering instructional content to becoming facilitators who empower students to learn independently and reflectively. This transformation requires a school culture that supports innovation, teacher readiness, and adequate facility support. If these principles are consistently applied, Indonesian education has the potential to produce students who are more creative, critical, adaptable, and relevant to the demands of the times.

A common challenge in curriculum reform, including in Indonesia, is the gap between what teachers see as ideal learning and what happens in classrooms. This is called the perception–practice gap. Teachers may believe they use certain learning strategies, but field observations often reveal otherwise. This gap is shaped

not only by teacher competence, but also by workload, school culture, resources, and administrative pressure.

Previous research shows a difference between perception and actual practice. Teachers tend to assess themselves as competent in applying innovative pedagogical approaches, even though classroom observations indicate that their implementation is not yet optimal. Waluyo and Apridayani (2021) highlight that teachers' professional beliefs often do not align with the instructional behaviors they demonstrate in actual classroom settings. In many cases, teachers assume that they have implemented active learning or differentiation simply because they provide opportunities for group discussion, even though the learning structure remains teacher centered. Bandura (1997) also asserts that perceptions of self-efficacy are often influenced by past experiences rather than by objective evidence. Fullan (2025) argues that educational change goes through several stages: initiation, implementation, and institutionalization. During the implementation phase, gaps between perception and practice are likely to emerge because teachers are still undergoing an adjustment period. This implies that although they understand the new curriculum, they have not yet fully translated that understanding into concrete learning strategies.

1.1 Purpose of the study

Teachers' perceptions of the implementation of the Merdeka curriculum in elementary schools were studied by Indrilia et al. (2025) and Nurhalimah et al. (2023). Pratama Putri (2024) and Sholeh et al. (2023) examined junior high school teachers' perceptions. Lubis et al. (2024) and Fathonah (2024) researched high school teachers' perspectives. This study differs by using a broader approach and scope. Unlike previous studies that focused on one educational level or data type, this study combines questionnaires and video observations in a mixed-methods design. This method shows both teachers' perceptions and classroom practices. This study also examines elementary, junior high, and high schools. Another new aspect is its focus on how perceptions align with teaching practices. By highlighting this gap, the study aims to describe how teachers perceive and practice using the Merdeka curriculum in schools.

2. METHOD AND MATERIALS

2.1 Research Design

This study uses an explanatory mixed-methods approach. It first collects quantitative data through questionnaires to show teachers' views on the Merdeka Curriculum. Next, it uses video observation and transcript analysis to confirm and deepen understanding of the questionnaire results. This approach was chosen to better capture differences between what teachers believe and what they do in class (Creswell & Plano Clark, 2018). Triangulating both data sources makes the research conclusions more valid and reliable (Johnson & Onwuegbuzie, 2004).

Research Subjects

The research subjects consisted of Indonesian language teachers from three levels of education (elementary, junior high, and high school). In addition to the three teachers observed, this study also included 11 questionnaire respondents with the following characteristics.

First, regarding age range, all respondents were in the 41–45 age group, indicating that the participants were teachers at a mature stage of their careers and had sufficient experience to offer in-depth perspectives.

Second, regarding district/city background, the respondents came from various regions in Indonesia, including Lumajang, Bulukumba, Sumenep, Jombang, Tulungagung, Kediri, Mamuju, and East Manggarai–NTT. This geographical diversity enriches perspectives and increases the relevance of the research findings.

Third, regarding teaching experience, respondents' experience ranged from <5 years to >20 years. The majority (more than 70%) were in the 11–20 years age group, indicating they had sufficient experience dealing with curriculum changes.

2.2. Research Instruments

The instruments used in this study include

A teacher perception questionnaire, consisting of 20 items on a 1–5 Likert scale. The questionnaire covered aspects of understanding the philosophy of the Merdeka Curriculum, PjBL, HOTS, differentiation, authentic assessment, and the support and obstacles to implementation. The instruments were developed based on the principles of the Merdeka Curriculum and on literature on competency-based learning. The questionnaire allowed researchers to systematically map teachers' perceptions (Dillman et al., 2014).

Video observation of learning was conducted in elementary, junior high, and high schools. Each video was analyzed using observation guidelines that included the categories "appropriate," "somewhat appropriate," "less appropriate," and "inappropriate." Observation provided authentic data on actual implementation, as recommended by Fraenkel and Wallen (2023), who noted that direct observation is an effective means of observing pedagogical practices in real life. Teacher-student interaction transcripts were analyzed to assess the quality of questions, instructional structure, student participation, and indicators of HOTS. This analysis supported the observation findings and helped identify interaction patterns not captured by the questionnaire.

2.3. Data Analysis Techniques

Quantitative Analysis

Questionnaire data were analyzed using descriptive statistics, including means. These results were used to identify trends in teachers' perceptions of the Merdeka Curriculum. This analysis is appropriate for exploratory research aimed at describing participants' general perceptions (Mills & Gay, 2019). The interpretation of perception scores is based on the following criteria.

Table 1
Criteria for Interpreting Student Response Questionnaire Scores

Score Range	Perception Category
1.00 – 1.80	Very Low
1.81 – 2.60	Low
2.61 – 3.40	Moderate
3.41 – 4.20	High
4.21 – 5.00	Very High

Qualitative Analysis

Observation data and transcripts were analyzed using content analysis techniques. Researchers grouped data by themes such as PjBL depth, differentiation forms, authentic assessment, HOTS, reflection, and classroom management. This method is suitable for systematically examining learning phenomena (Krippendorff, 2018).

Triangulation of Perception and Practice

Triangulation was conducted by comparing questionnaire results and observations to see the correspondence between teachers' perceptions and actual practices. This step was important for identifying the perception-practice gap, which often arises in curriculum implementation studies (Beauchamp et al., 2014).

Ethical Considerations

This research was performed in compliance with ethical requirements for studies involving human subjects. Before data collection, the requisite clearances were obtained from the relevant institutions and school authorities. Participation in the study was voluntary, and informed consent was acquired from all individuals.

Participants were appreciated of the study's objective and their entitlement to withdraw at any moment without repercussions. Data was gathered via surveys and classroom video observations. All data was anonymized, and no personal identifiable information was documented. Video recordings were used exclusively for research purposes and handled with strict confidentiality.

All procedures conducted in this study adhered to globally recognized ethical standards and the principles outlined in the Declaration of Helsinki.

3. RESULTS

The study's results show that teachers have positive perceptions and high self-confidence in their understanding and application of curriculum principles. However, the observations reveal that learning practices are not yet fully aligned with these perceptions, especially in PjBL, differentiation, authentic assessment, and HOTS development. The following are the study's results at the elementary, junior high, and high school levels.

3.1. Research Results at Elementary School

The results of the research at the elementary school level are presented through a comparison between teachers' perceptions and learning practices recorded in classroom observations. This comparison helps show the extent to which teachers' understanding aligns with its implementation in the field. Details of the alignment are shown in the following table.

Table 2:
Alignment between Perceptions and Teaching Practices of Elementary School Teachers

Main aspects	Perception Score	Perception Category	Learning Analysis Results	Consistency between perception and practice
Understanding of the philosophy and relevance of the Merdeka Curriculum	4.25	very high	Teachers understand the concept of pantun and local culture, but their perception is still superficial and learning is largely teacher-directed. Students' thinking skills have not yet developed.	Partially appropriate
Project-Based Learning	4.33	very high	Students create pantuns as "products," but the process is very brief without exploration, planning, or revision. Only a few students participate.	Less appropriate
Differentiated learning	4.25	very high	There is no adjustment of tasks based on students' abilities or interests. All students do the same thing in the same way.	Not yet appropriate
Formative and authentic assessment (rubrics, feedback)	4.37	very high	Teachers give praise but do not use rubrics or specific feedback. There is no systematic assessment of process or attitude.	Less appropriate
Critical and creative thinking skills (HOTS)	4.25	very high	Activities are still at a basic level of analysis, such as finding rhymes and counting syllables. There are no questions or activities that encourage evaluation and creativity.	Partially appropriate
Learning reflection and student feedback	4.37	very high	There are no reflection sessions at the end of the lesson. Students are not invited to review what they have learned or their difficulties.	Not yet appropriate
Class management and teacher-student interaction	4.50	very high	The classroom atmosphere is conducive and the teacher is communicative, but interaction is still predominantly one-way and student involvement is uneven.	Partially appropriate

3.2. Research Results at the Junior High School Level

The results of the research at the junior high school level are presented by comparing teachers' perceptions of the implementation of the Merdeka Curriculum with classroom learning practices observed. This comparison provides an overview of the consistency between teachers' beliefs and the instructional actions they implement. Details of the alignment are shown in the following table.

Table 3:

Alignment between Junior High School Teachers' Perceptions and Teaching Practices

Main aspects	Perception Score	Perception Category	Learning Analysis Results	Consistency between perception and practice
Understanding of the philosophy and relevance of the Merdeka Curriculum	3.7	High	Teachers explicitly state the learning objectives of structured perception and its connection to the local context (e.g., Malang/island). Teachers also emphasize aspects of attitude (mutual respect, responsibility). However, the teaching style is very "active-teacher" rather than giving full autonomy to students; pedagogical freedom is evident but limited to the choice of media (newspapers, cell phones).	Partially compliant
Project-based learning / Student Products and Participation	4.1	High	There are clear group assignments. Work time is 20 minutes, followed by group presentations. This *is similar to* a mini-documentation project: posted on the bulletin board. However: the process is short (20 minutes), planning is minimal, there is no revision/iteration phase or wider publication beyond the bulletin board. The roles of members are not documented; only representatives give presentations.	Less appropriate
Differentiated learning	4.3	Very High	There is no evidence of task adaptation according to level/interest: all groups receive the same task (choose 1 news item, find elements). There is an emphasis on attitude/cooperation, but there are no alternative tasks or individual scaffolding for students who struggle/are quick learners. The teacher suggests using cell phones and textbooks as resources, but this is not formal differentiation.	Not suitable
Formative assessment and authentic assessment (rubrics, feedback)	4.3	Very High	Assessment is evident in the form of: (a) attitude criteria mentioned at the beginning, (b) verbal appreciation, (c) results posted on the bulletin board as documentation. However, there are no written rubrics in the classroom, no written feedback or observation notes	Less appropriate

			for each group. The teacher provides reinforcement and there is a brief reflection at the end, but systematic formative assessment is not evident.	
Development of HOTS (critical and creative thinking)	4.3	Very High	Activities: analyzing persuasive texts, finding factual/imperative/referential sentences, group discussions, presentations, and public question and answer sessions. Activities encourage analysis and application (C3–C4). The teacher also prompts and asks for evidence. However, creative/synthesis activities will only be carried out in the next meeting. HOTS assessment questions are mentioned positively in the questionnaire, and observations show *HOTS triggers*, but the implementation is still predominantly analytical, with not many synthesis/creation tasks in this session.	Partially appropriate
Learning reflection and metacognition	4.3	Very High	Observations showed a brief reflection session at the end: the teacher asked students to mention "what they learned" and "shortcomings time." The teacher asked students to convey what they had gained. This was a direct but brief and shallow reflection. So, there was a *reflection practice*, but the duration/depth was lacking.	Partially appropriate
Class management and teacher-student interaction	4.3	Very High	Strong classroom management: solid opening, ice-breaking, motivation, clear task instructions, repetition of instructions. Enthusiastic atmosphere. The teacher also emphasizes ethics. Observers provide positive feedback. Challenges: equipment/context (limitations of newspapers, shared cell phone use, laptop technical issues) are discussed but do not disrupt classroom control.	Aligned

3.3. Research results at the high school level

The results of the research at the high school level are presented through a comparison between teachers' perceptions of the implementation of the Merdeka Curriculum and the learning practices observed in the classroom. This comparison provides an overview of the level of consistency between teachers'

conceptual understanding and their instructional practices. Details of the alignment are shown in the following table.

Table 4:
Alignment between Teachers' Perceptions and Learning Practices at the High School Level

Main Aspect	Perception Score	Perception Category	Learning Analysis Results	Consistency Between Perception and Practice
Understanding of the philosophy and relevance of the Merdeka Curriculum	3.8	High	Teachers begin lessons with prayer and motivation, then convey complete learning outcomes and objectives ("writing negotiation dialogue texts in a coherent, creative manner..."). There are explanations of competencies and their relevance to everyday life (negotiation in the family, school, community).	Aligned
Project-based learning / Student Products and Participation	4	High	Students create *negotiation text products* in groups, then *display and present their results*. The activity is similar to a mini-project with concrete results and active involvement. However, the completion time is short (±10 minutes) and there is no revision stage.	Partially in line
Differentiated learning	4	High	Teachers use a *random* system to form groups and assign different themes (family, teacher, seller, friend). This demonstrates *content differentiation*, but there is no differentiation of processes/tasks based on individual abilities.	Partially appropriate
Formative assessment and authentic assessment (rubrics, feedback)	4	High	Teachers provide *verbal assessment* (praise, applause), oral feedback, and presentation evaluation. Teacher and observer self-reflection shows that formative assessment is carried out but not systematically (no written rubrics).	Partially compliant
Development of HOTS (critical and creative thinking)	4	High	Students analyze negotiation videos, identify structures and characteristics, and then compose their own texts. Discussions and presentations stimulate analytical	Partially appropriate

			and argumentative skills. However, *the examiner's reflection* highlights the need for deeper "reasoning and argumentation" skills.	
Reflection on learning and metacognition	4	High	The teacher concludes with reflection: students summarize the material and mention their learning impressions ("interesting and enjoyable learning"). Reflection is present but not yet in the form of individual writing.	Partially appropriate
Class management and teacher-student interaction	4	High	Class management is excellent: there is prayer, ice breaking, random group division, clear instructions, and an enthusiastic atmosphere. Feedback from observers assesses the teacher as disciplined, systematic, and able to motivate students.	Partially

4. DISCUSSION

4.1. Perceptions and Teaching Practices of Elementary School Teachers

The study's results at the elementary school level reveal interesting dynamics in how teachers understand and implement the Merdeka Curriculum in the classroom. The questionnaire data show that teachers have a strong understanding of the philosophy of the Merdeka Curriculum, with an average score of 4.25 or higher, indicating a very high level of understanding. However, video observations reveal that most of the implementation is still in its early stages and has not yet fully reflected the principle of independent learning, which is at the core of this curriculum. This phenomenon aligns with Kennedy's (2016) findings, which state that teachers often understand curriculum concepts conceptually but have difficulty translating them into consistent instructional practices in the classroom. This gap between conceptual understanding and practice is consistently apparent in the following aspects.

In terms of curriculum understanding, teachers are strong conceptually but weak in deepening meaning. Teachers can relate pantun material to local culture, a positive practice in line with the spirit of contextualization in the Merdeka Curriculum. However, initial perceptions have not explored the relevance of the material to students' lives. In other words, teachers demonstrate curriculum awareness but have not fully developed instructional responsiveness. Darling Hammond (2021) emphasizes that the success of competency-based learning depends on teachers' ability to connect the material to students' actual experiences and needs.

In terms of PjB implementation, students have produced pantun products, but the learning process was limited to a short assignment without the stages of research, planning, revision, and publication. This shows what Guo et al. (2020) refers to as a pseudo-project, which is an activity that looks like a project but does not meet the essential standards of PjBL. This explains why the questionnaire scores were high, but the observations indicated "less appropriate."

In terms of differentiated learning, no strategies for differentiating content, process, or product were found. All students received the same assignment, regardless of ability or interest. In fact, Tomlinson (2016) explains that differentiation is the foundation of learning that values student uniqueness. The lack of differentiation in elementary schools is largely due to teachers' perception that lower-level classes require uniformity rather than diversity. This finding is one of the most significant implementation gaps.

Regarding authentic assessment, teachers give high scores on formative assessments, but observations show no use of rubrics, observation notes, or specific feedback. Reinforcement only takes the form of applause and verbal praise. According to Gulikers, Bastiaens, and Kirschner (2004), authentic assessment requires clear evidence of performance and transparent assessment instruments, both of which are not yet evident in the implementation of elementary schools. The absence of reflection at the end of learning also indicates that students' metacognitive awareness is not yet present.

In terms of HOTS-based learning, it is still at the initial analytical level. Students are to be asked to count syllables and identify rhymes. However, there are to be no evaluative questions, such as "why are pantuns important?" or creative tasks that require interpretation. Rookhart (2010) emphasizes that HOTS requires activities that encourage students to evaluate, create, and interpret meaning, not just recognize patterns.

The findings at the elementary school level show a pattern that often appears in curriculum implementation studies: teachers have an optimistic perception of their competence, but classroom practices do not yet fully reflect the pedagogical demands of the Merdeka Curriculum. The biggest gaps lie in differentiation, authentic assessment, and the depth of PjBL. This analysis provides strong empirical evidence that the implementation of the Merdeka Curriculum is still in the early adaptation phase at the elementary school level.

4.2. Teachers' Perceptions and Learning Practices at Junior High School

Research results at the junior high school level indicate a complex dynamic between teachers' perceptions of the implementation of the Merdeka Curriculum and classroom learning practices. In general, teachers gave high scores on almost all aspects of the questionnaire, from understanding the philosophy to the application of HOTS. However, video observations revealed that most applications of Merdeka Curriculum principles remained partial and inconsistent. This phenomenon commonly occurs during the transition phase of a new curriculum, when teachers understand the concepts at a cognitive level but are not yet fully able to apply them in effective instructional practice (Clandinin, 2006).

To understand the philosophy of the Merdeka Curriculum, teachers must take initial steps by explicitly conveying learning objectives and linking them to local contexts, such as Malang or Sempu Island. Teachers also emphasize the importance of mutual respect and responsibility. However, the learning process is still very teacher-directed, where teachers guide students step by step in a strict manner. This condition indicates that students' learning autonomy, which is the core of independent learning, has not been fully realized. According to Yates and Collin (2010), many teachers tend to return to direct instruction when faced with the demands of the new curriculum because they feel more pedagogically secure. In terms of PjBL, teachers scored highly on the questionnaire, but observations showed that the activities resembled mini-projects, lasting 20 minutes and lacking in-depth investigation, planning, revision, or reflection. Although poster products were produced, they could not be categorized as complete projects pedagogically. This is in line with the findings of Krajcik and Shin (2014), who stated that PjBL requires a continuous process for students to gain in-depth learning experience, not just to produce products quickly.

The differentiation aspect was one of the most significant findings. Although the questionnaire score on the differentiation item was very high (4.3), observations indicated no instructional adaptation based on students' ability levels, interests, or readiness. Instructions, tasks, and expected outputs were the same for all groups. This confirms what Deunk et al. (2018) stated: many teachers conceptually believe that differentiation is important but find it difficult to implement in heterogeneous classrooms.

In terms of formative assessment, teachers mentioned criteria and gave verbal appreciation, but did not use rubrics, checklists, or more structured written feedback. Assessment was generally summative and momentary. Sadler (1989) emphasized that the essence of formative assessment is to provide information that students can act on, so feedback must be specific, not just praise.

The HOTS aspect at the junior high school level shows promising results. Teachers encourage students to analyze to have persuasive texts, look for evidence, and provide reasons for their answers. These activities demonstrate analytical elements (C3–C4) that are relevant to the requirements of the Merdeka Curriculum. However, activities that encourage higher levels of synthesis and creativity, such as creating new persuasive texts, were postponed to the next meeting. Zohar (2004) states that HOTS requires not only momentary cognitive stimulation but also continuous integration into the learning process.

Reflection on learning emerged, but only at a basic level, such as mentioning what was learned and time constraints. This type of reflection has not yet reached metacognitive depth, such as self-evaluation or the development of improvement plans. In fact, according to Zimmerman (200), quality reflection is an integral part of self-regulated learning.

Classroom management is one of the teachers' strengths. Observations Classroom management is one of the teachers' strengths. Observations show a conducive classroom atmosphere, clear instructions, and active student interaction. Teachers can also maintain motivation through ice-breaking activities and verbal reinforcement. Technical challenges, such as limited newspapers, cell phones, and device constraints, arose but did not interfere with the smooth running of the class. This is consistent with Hattie's findings (2010) that teacher effectiveness is most evident in their ability to manage the classroom, not just in the pedagogical strategies they use. Overall, the results of the research at the junior high school level show to have that teachers are to have in the transition phase of implementing to have the Merdeka Curriculum: they understand to have the core concepts and are to have able to have to keep to have the class lively, but have to have not yet fully implemented to have the principles of differentiation, authentic assessment, and PjBL in depth. This analysis provides a realistic picture of current learning conditions in junior high schools and opens the door to more targeted policies and training.

Research results at the high school level show that the implementation of the Merdeka Curriculum is at a relatively more mature stage compared to elementary and junior high schools, although there is still room for improvement Questionnaire data show that teachers have to have a strong understanding of the philosophy of the Merdeka Curriculum, as reflected in high scores on items related to understanding objectives, material relevance, and pedagogical freedom. Classroom observations support these results: teachers opened the lesson systematically, explained the learning outcomes clearly, and linked the negotiation text to real situations students experienced in their families, schools, and communities. This practice aligns with Ornstein and Hunkins (2017), who state that teachers who understand the curriculum's philosophy can link the material to students' lives, making learning more meaningful.

In Project-Based Learning, students draft negotiation texts in groups and present the results. This activity demonstrates a collaborative process and concrete products—two important elements in PjBL. However, the process takes place in a short time (±10 minutes) without in-depth exploration, improvement, or revision

stages. Pedagogically, this activity is more appropriately called a structured group task than a complete project. According to Blumenfeld et al. (1991), the essence of a project lies in continuous involvement and an iterative process, rather than in the final product alone. This explains why the PjBL aspect is only rated as "partially appropriate."

The application of differentiation at the high school level also shows positive developments, although it is not yet fully optimal. Teachers differentiate content by giving different negotiation themes to each group (e.g., negotiation with teachers, family, friends, or sellers). This practice creates contextual variation, encouraging student creativity. However, there is no differentiation of processes or products to suit individual needs, abilities, or interests. These findings align with the opinion of Smale-Jacobse et al. (2019), who stated that differentiation often stops at content variation because teachers find it easier to implement than to adapt the process or task outputs.

The formative assessment aspect shows a similar pattern to the previous level: teachers provide verbal feedback, applause, and motivational encouragement, but do not use rubric or systematic written assessment instruments. In fact, Black and Wiliam (2012) emphasize that formative assessment is only effective when accompanied by clear assessment indicators and specific feedback that students can follow up on. This shows that although teachers' perceptions of formative assessment are high, the practice has not yet met the standards of authentic assessment set by the Merdeka Curriculum.

In terms of HOTS, high school learning has shown signs of development in analytical and argumentative skills. Students are to analyze negotiation videos, identify text structures, and compose their own negotiation texts. These activities encourage higher-order thinking skills, especially analysis and application. However, the improvement in students' evaluative and argumentative skills, as recommended by observers, has not yet fully emerged. According to Ghanizadeh et al. (2020), ideal HOTS require students to evaluate arguments and construct critical opinions in a structured manner, rather than merely identify elements. Learning reflection was conducted through a final discussion that gave students space to share their reflections and summarize the material. This reflection was useful but remained verbal and did not address individual metacognition. Zimmerman (2002) emphasizes that effective reflection encourages students to recognize their own learning strengths and weaknesses, and that written reflection or learning journals can further strengthen this aspect. Classroom management in high school appears to be very good. Teachers can create a warm, enthusiastic, and participatory learning atmosphere. Random group division, ice-breaking, and clear directions reflect strong managerial capacity. This success supports Marzano's (2003) view that effective classroom management is one of the main predictors of learning success.

Overall, the research results at the high school level show that teachers are in a more stable phase of implementing the Merdeka Curriculum than at the previous level. A strong understanding of concepts, effective classroom management, and several curriculum principles have been applied. However, the depth of PjBL, the application of process differentiation, and authentic assessment still need to be strengthened to align with the pedagogical standards of the Merdeka Curriculum. These findings reinforce Priestley and Biesta's (2013) claim that curriculum implementation is not only a matter of understanding policy but also of teachers' professional ability to implement learning strategies consistently and reflectively.

5. CONCLUSION

The results of the study show that the Merdeka Curriculum has been implemented across the three levels of elementary, junior high, and high school education, but with varying degrees of depth and consistency. In general, teachers need a positive perception of their ability to apply curriculum principles and high

confidence in their ability to do so. However, classroom observations reveal that most learning practices do not yet fully meet the expected standards, especially in differentiation, Project-Based Learning, and authentic assessment.

At the elementary level, curriculum implementation is still basic and very teacher-centered. Teachers understand the concept of the Merdeka Curriculum but struggle to translate it into learning practices that foster independence, differentiation, and higher-order thinking skills (HOTS). The junior high level shows progress, especially in text analysis, discussion, and classroom dynamics. However, PjBL, differentiation, and formative assessment are not yet optimal. High school is the most stable level, with teachers demonstrating stronger pedagogical capacity, learning that is relevant to students' lives, and effective classroom management. Nevertheless, the depth of PjBL, the quality of high-level argumentation, and the systematic assessment instruments still need improvement.

Overall, this study clarifies the existence of a perception–practice gap at all three levels, albeit to varying degrees. These findings indicate that implementing the Merdeka Curriculum requires not only conceptual understanding but also practical pedagogical skills and continuous system support.

Future research should involve a larger number of schools and teachers to enable broader generalization of findings on the implementation of the Merdeka Curriculum. In addition, further studies should consider using more in-depth methods, such as interviews, focus group discussions, or classroom ethnographic studies, to more comprehensively explore teachers' understanding. Experimental or quasi-experimental research can also be conducted to assess the effectiveness of specific training, such as training in differentiation, authentic assessment, or Project-Based Learning, on improving the quality of teachers' teaching practices. Finally, longitudinal research is needed to monitor the development of the Merdeka Curriculum implementation over time, so that we can see how teachers adapt, develop, and adjust their learning practices in line with changes in education policy. We do not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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