



## Integrating Digital Assessment in Islamic Education within the Merdeka Curriculum : A Study Case at SMP Negeri 2 Ngemplak

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### ABSTRACT

This study aims to analyze the implementation of digital-based assessment in Islamic Religious Education (PAI) within the framework of the Merdeka Curriculum at SMP Negeri 2 Ngemplak. Using a descriptive qualitative approach, data were collected through classroom observations, in-depth interviews with PAI teachers, and supporting documentation. The research explores how digital tools are integrated into the assessment process and how these methods align with the principles of the Merdeka Curriculum, which emphasizes holistic, student-centered learning and character development. The findings reveal that PAI teachers at SMP Negeri 2 Ngemplak have adopted a comprehensive assessment strategy that addresses cognitive, affective, and psychomotor domains. The evaluation process follows systematic stages: planning, implementation, data processing, interpretation, and reporting. Digital tools, particularly Google Forms and Quizizz, are utilized as primary instruments for formative and summative assessments. These tools enable efficient question delivery, automatic grading, real-time feedback, and secure data storage, enhancing the overall evaluation process. However, the integration of digital assessment is not without challenges. Issues such as limited access to devices, unstable internet connectivity, and the need for increased digital literacy among students and teachers have been identified as significant barriers. Despite these obstacles, the study demonstrates a progressive shift toward digital transformation in educational assessment, even within Islamic education subjects. This research contributes to the growing body of literature on the application of educational technology in religious instruction and provides practical insights for educators and policymakers aiming to enhance assessment practices in line with the goals of the Merdeka Curriculum. The findings suggest that with adequate support and infrastructure, digital assessment can serve as an effective tool for evaluating diverse student competencies in Islamic Education.

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## INTRODUCTION

The Merdeka Curriculum is a form of educational transformation initiated by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia. This curriculum emphasizes learner-centered learning, character building, and authentic assessment that reflects real-world situations (Kemendikbudristek, 2022). As the primary approach, authentic assessment involves evaluation based on assignments that replicate real-world conditions, with the aim of measuring students' capacity to address contextual challenges. Therefore, teachers' skills in selecting good and effective learning assessments that can measure students' cognitive, affective, and psychomotor aspects are highly needed.

In the context of PAI learning, learning is designed not only to instill cognitive knowledge but also to foster spiritual and social attitudes and develop religious skills holistically (Gusri et al., 2024). Unfortunately, assessment practices in PAI subjects are still predominantly carried out conventionally, namely using written tests and memorization that only measure students' cognitive achievements. In fact, assessment should be an integral part of the learning process that not only provides information about learning outcomes but also serves as a reflective tool for teachers and students to develop meaningful learning (Nurhasanah et al., 2023).

Therefore, the integration of digital assessment is a potential alternative strategy to improve learning effectiveness while addressing the demands of digital transformation in schools. Digital assessment enables teachers to evaluate students' learning outcomes in a more dynamic, flexible, and enjoyable manner, while also encouraging active student engagement. The use of platforms such as Google Forms, Quizizz, and Kahoot not only simplifies the evaluation process but also allows for the integration of Islamic values into contextual and engaging assessment activities (Magdalena et al., 2021). Additionally, digital assessment can support evaluations that address affective and psychomotor domains in a more practical manner, through collaborative assignments, projects, portfolios, and videos of religious practices to observe the development of Islamic values embedded in students' attitudes and actions (Ahmad et al., 2025).

Several studies have shown the potential of digital assessment in improving the quality of learning. Muqtadir et al., (2025) revealed that the use of Quizizz in PAI assessment can increase students' learning motivation through a gamification approach. Susanto, (2023) explains that IT-based assessment can be used not only to evaluate cognitive aspects but also affective and psychomotor aspects through media such as worship practice videos and digital portfolios. Additionally, Shofiyani & Fatmawati, (2024) demonstrated that the use of PAI textbooks based on the Merdeka Curriculum effectively enhances participation and contextual learning experiences.

However, these studies have not specifically examined digital assessment strategies comprehensively in the context of PAI at the junior high school level, particularly within the Merdeka Curriculum framework. Yet, a deep understanding is needed of how teachers design, implement, and follow up on digital assessments to align with holistic learning principles and student characteristics.

Therefore, this study aims to analyze the implementation strategies of digital assessment in PAI learning at SMP Negeri 2 Ngemplak, focusing on the integration of cognitive, affective, and psychomotor domains in accordance with the principles of the Merdeka Curriculum. This study also seeks to identify the challenges faced by teachers in implementing digital assessment, as well as how teachers adapt and innovate to overcome these challenges.

## LITERATURE REVIEW

### Merdeka Curriculum

The Merdeka Curriculum is a form of educational transformation that emphasizes student-centered learning, character building, and the development of essential competencies. In the context of Islamic Religious Education (PAI), the Merdeka Curriculum opens up opportunities to integrate Islamic values more deeply through project-based approaches, reflection, and outcome-based assessment.

Shofiyani & Fatmawati, (2024) developed a Merdeka Curriculum-based textbook that has proven effective in increasing student participation in PAI learning. Expert validation and student responses showed scores above 80% in all assessment aspects, indicating that the materials and approaches used were able to foster learning interest and provide contextual learning experiences. The textbook also demonstrates how Islamic values can be internalized through differentiated learning and project tasks that reflect real-life situations.

However, its implementation still faces various challenges, as highlighted by Nais et al., (2024) who found that many PAI teachers at the secondary school level are not yet fully prepared to develop teaching materials and assessments based on the Merdeka Curriculum. These challenges include a lack of training, limited resources, and resistance to changes in teaching approaches that emphasize self-reflection, collaboration, and real-world problem solving.

### Learning Evaluation

Evaluation is an important component of the learning system that serves to measure the achievement of learning objectives in cognitive, affective, and psychomotor aspects (Ulfah, 2022). According to Nurhasanah et al., (2023), holistic evaluation in these three domains is essential in Islamic education to ensure that students not only gain theoretical understanding but also develop attitudes and practical skills in accordance with Islamic teachings. In addition, evaluation is used to assess the effectiveness of a learning process that has been implemented (Naim, 2021). Research conducted by Sholahudin et al., (2025) on Islamic Education (PAI) revealed that cognitive domain evaluation is generally conducted through formative and summative tests, such as objective tests and essays, while the affective domain is assessed through observations of students' attitudes recorded in teachers' journals,

and the psychomotor domain is evaluated through direct practices such as wudhu, reading the Quran, and prayer.

In addition to using tests and observations, psychomotor assessment in PAI can also be conducted through portfolios, direct worship practices, projects or real products, and other non-test techniques. For example, Maulidya & Sa'i, (2022) note that psychomotor evaluation is no longer just simple observation but uses more varied techniques such as practice, projects, and portfolios, with the results of the practice presented in a structured manner and used for follow-up actions such as remedial or enrichment. Thus, the development of evaluation instruments that can accommodate the three main domains of cognitive, affective, and psychomotor skills is crucial in creating comprehensive, fair, and meaningful PAI learning.

### **Digital Assessment in PAI Learning**

Advances in information technology have created significant opportunities for the world of education, including in the area of assessment. Digital assessment is a form of evaluation that utilizes digital media and interactive platforms such as Google Forms, Quizizz, and Kahoot, enabling teachers to conduct assessments in a faster, more efficient, and more engaging manner for students. Research Muqtadir et al., (2025) on the use of the Quizizz platform in Islamic Education assessment has shown that it significantly enhances students' learning motivation. This game-based assessment not only evaluates cognitive aspects but also fosters enjoyable interactions and cultivates students' enthusiasm for learning in understanding Islamic values in a contextual manner.

Additionally, Susanto, (2023) emphasizes that digital assessment enables teachers to evaluate affective and psychomotor aspects more practically through media such as practice videos of religious rituals, digital reflections, and online portfolios. Another advantage of digital assessment is its ability to provide instant feedback, facilitate the collection of student development data, and increase student participation. He also notes that e-assessment can be a reflective tool for teachers in designing more personalized and meaningful learning.

## **METHOD**

This study uses a qualitative method with a descriptive approach. This approach was chosen because it allows researchers to gain an in-depth understanding of the implementation of digital assessment in PAI learning at SMP Negeri 2 Ngemplak, as well as to explore phenomena in their natural context (Creswell, 2021; Sugiyono & Lestari, 2021)

Research data were collected through classroom observations, in-depth interviews with Islamic Education teachers, and documentation analysis. Observations were conducted directly in the field to observe the assessment practices taking place. In-depth interviews were conducted to explore information related to strategies, challenges, and teachers' perspectives on digital assessment. Additional

data were obtained from supporting documentation, such as learning tools and assessment results.

The data analysis model in this study refers to Miles and Huberman's interactive approach, which includes the processes of data reduction, information presentation, and conclusion drawing. To ensure data validity, this study applied source triangulation by comparing the results of interviews, documents, and relevant literature (Moleong & Lexy, 2021).

## **FINDINGS**

### **Implementation of Digital Assessment in Islamic Education Learning at SMP Negeri 2 Ngemplak**

This study reveals that SMP Negeri 2 Ngemplak has implemented digital assessment in Islamic Education (PAI) learning in a gradual and systematic manner, in line with the principles of the Merdeka Curriculum, which emphasizes holistic, differentiated, and character-based learning. Technology integration is carried out to support evaluation in three main domains: cognitive, affective, and psychomotor. Evaluation is not only viewed as a tool to measure academic achievement but also as part of the learning process that encourages active participation and deep reflection from students.

### **Evaluations Stages of Digital Assessment in PAI Learning at SMP Negeri 2 Ngemplak**

#### **1. Evaluation Planning**

PAI teachers begin the evaluation process with thorough planning, including the development of evaluation frameworks, the formulation of evaluation objectives, and the selection of digital instruments. Teacher consultations are used to align questions and evaluation formats, particularly in Daily Tests (UH), Mid-Semester Assessments (PTS), and End-of-Semester Assessments (PAS). The use of digital platforms such as Google Forms and Quizizz has become an integral part of this process. These platforms not only facilitate data collection and processing but also provide flexibility in designing varied and engaging questions.

#### **2. Implementation of Evaluation**

At the implementation stage, assessments are conducted online through an agreed platform. For the cognitive domain, evaluations are conducted through multiple-choice questions, short-answer questions, and online quizzes. Meanwhile, for the affective domain, teachers use direct observation techniques and attitude assessment through digital reflection, student journals, and attitude questionnaires. Assessment is conducted by teachers, peers, and self-assessment.

For the psychomotor aspect, students are asked to create videos of religious practices such as wudhu and prayer, which are then uploaded and evaluated based on a predetermined assessment rubric.

### 3. Data Processing and Interpretation

Data processing is carried out by first collecting data, then processing it in such a way that the data can be interpreted and has meaning. In addition, teachers also interpret learning outcomes both individually and in groups to comprehensively map students' levels of understanding, attitudes, and skills. The data obtained is also used for follow-up, such as remedial programs for students who have not achieved the Minimum Completion Criteria (KKM).

### 4. Reporting Evaluation Results

Evaluation results are communicated to students and parents in the form of printed learning reports. These reports include academic achievement, attitude assessment, and worship practice performance. Teachers also use these results to develop further learning strategies that are more suited to the needs of each student. The purpose of reporting evaluation results is so that all parties can know the progress and achievements of students after going through the learning process.

## **Strategies of PAI Teachers in Optimizing Digital Assessment within the Merdeka Curriculum Framework**

Islamic Education (PAI) teachers at SMP Negeri 2 Ngemplak have implemented various strategies in designing and implementing digital assessments that align with the principles of the Merdeka Curriculum. The approach used is no longer solely focused on mastering cognitive content but also emphasizes the development of students' attitudes and spiritual skills comprehensively. One of the main strategies applied is the learning by doing approach, particularly in the psychomotor aspect, with an emphasis on assessing religious practices such as wudhu, congregational prayer, and other religious tasks.

Teachers also develop project-based assessment models, where students are encouraged to produce reflective products that reflect their understanding of Islamic values. For example, students are asked to create videos of worship practices, write religious reflection journals through Google Docs, or take online quizzes with self-assessment and peer assessment. In this case, digital assessment not only functions as a testing instrument but also as a means of character building and strengthening the Pancasila student profile.

This integration of technology demonstrates the teachers' innovation in combining Islamic values with 21st-century digital skills. The use of platforms such as



Google Forms and Quizizz has been proven to speed up the evaluation process, reduce teachers' administrative burdens, and increase students' enthusiasm and active participation in the learning process.

### **Advantages and Challenges in Digital Assessment Integration**

After conducting observations and interviews with Islamic Education teachers, the following advantages and disadvantages were identified after using technology in learning evaluation at SMP Negeri 2 Ngemplak using media such as Googleforms and Quizzes:

Advantages include:

- 1) Students can immediately see their results.
- 2) Item analysis can be conducted immediately,
- 3) Teachers no longer need to grade the assessments,
- 4) Randomizing answer choices and question order makes it difficult for students to cheat.

Additionally, there are several drawbacks, including:

- 1) It requires the availability of complete technological infrastructure and facilities to conduct effective and efficient learning evaluations,
- 2) A stable internet connection is needed for an extended period,
- 3) It can lead to decreased motivation if there are disruptions during online tests,
- 4) Requires intensive supervision and guidance from someone who understands information technology

## **DISCUSSION**

The findings above indicate that digital assessment in Islamic Education (PAI) at SMP Negeri 2 Ngemplak has reflected the spirit of the Merdeka Curriculum, particularly in addressing the three main domains of assessment: cognitive, affective, and psychomotor. This aligns with the research findings of Sholahudin et al., (2025), which emphasize the importance of comprehensive evaluation in Islamic education.

The use of digital platforms such as Google Forms and Quizizz also supports the findings of Muqtadir et al., (2025) that technology-based assessments can increase

learning motivation and teacher efficiency in managing evaluations. Teachers' strategies in using worship practice videos to assess psychomotor domains are also in line with Susanto, (2023) thinking that digital assessments can measure affective aspects and skills in an applicable manner.

However, several challenges still arise, particularly related to the readiness of infrastructure and digital literacy among teachers and students. This supports the findings of Nais et al., (2024), who state that many teachers are not yet technically and pedagogically prepared to implement technology-based assessments in the Merdeka Curriculum. Therefore, sustained support is needed in the form of teacher training on technology, improved facilities and infrastructure, and collaboration among teachers to optimize the implementation of digital assessments in schools.

These findings also indicate that digitalization in religious education is not merely about efficiency in evaluation implementation but also opens new opportunities for instilling Islamic values that are more contextual and relevant to students' lives in the current digital era.

## CONCLUSION

Based on the results of research conducted at SMP Negeri 2 Ngemplak, it can be concluded that the implementation of digital assessment in Islamic Religious Education (PAI) learning has been carried out gradually and systematically in accordance with the principles of the Merdeka Curriculum. PAI teachers are able to design evaluation strategies that address the three main domains cognitive, affective, and psychomotor by utilizing digital platforms such as Google Forms and Quizizz.

The assessment process is carried out sequentially, starting from planning, implementation, data processing, to reporting learning outcomes. Teachers do not rely solely on written tests but also develop project-based assessments, religious practice evaluations, and digital reflections. This strategy demonstrates efforts to integrate Islamic values with educational technology in a contextual and practical manner.

However, the implementation of digital assessment also faces several challenges, such as limitations in devices and internet connectivity, varying levels of digital literacy among students, and the need for teacher training in technology. Despite these challenges, teachers demonstrate adaptability and creativity in overcoming them.

The implementation of digital assessment in PAI learning at SMP Negeri 2 Ngemplak has contributed to improving the effectiveness of evaluation in line with the direction of the Merdeka Curriculum development, although it still requires support in terms of infrastructure and strengthening teacher capacity.



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