

Optimizing Project-Based Learning and Formative Assessment in Islamic Religious Education to Foster Elementary School Students' Intrinsic Motivation under the Merdeka Curriculum

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Abstract: This study aims to identify the gap between the current implementation of Islamic Religious Education (PAI) learning and the learning objectives outlined in the Merdeka Curriculum at SD Intensif Al-Musthofa, as well as to formulate appropriate instructional development strategies. The findings indicate that students exhibit low reading interest, high enthusiasm for contextual numeracy learning, and learning motivation that is predominantly driven by external factors. Instruction remains largely teacher-centered through lecture-based methods, while the utilization of digital learning media and diagnostic and formative assessments has not yet been optimized, despite the availability of adequate educational facilities. Therefore, this study recommends the implementation of Project-Based Learning (PjBL) integrated with differentiated instruction, interactive digital media, and strengthened diagnostic and formative assessments to enhance students' intrinsic motivation, literacy, numeracy, and social skills.

Keywords: Project-Based Learning; Intrinsic Motivation; Literacy; Merdeka Curriculum; Needs Analysis.

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Abstrak: Penelitian ini bertujuan mengidentifikasi kesenjangan antara pembelajaran PAI yang berlangsung dengan target Kurikulum Merdeka di SD Intensif Al-Musthofa serta merumuskan strategi pengembangannya. Hasil penelitian menunjukkan rendahnya minat baca siswa, tingginya antusiasme terhadap pembelajaran numerasi kontekstual, serta dominannya motivasi belajar eksternal. Pembelajaran masih didominasi metode ceramah, sementara pemanfaatan media digital dan asesmen diagnostik maupun formatif belum optimal meskipun sarana sekolah memadai. Oleh karena itu, direkomendasikan penerapan Project Based Learning (PjBL) yang dipadukan

dengan pembelajaran diferensiasi, media digital interaktif, dan penguatan asesmen berkala untuk meningkatkan motivasi intrinsik, literasi, numerasi, dan keterampilan sosial siswa.

Kata Kunci: Project Based Learning; Motivasi Intrinsic; Literasi; Kurikulum Merdeka; Analisis Kebutuhan.

A. Introduction

Elementary education serves as the primary foundation for developing students' literacy, numeracy, character, and social competencies from an early age. The implementation of the Merdeka Curriculum requires a paradigm shift from teacher-centered instruction to student-centered learning that emphasizes project-based learning, differentiated instruction, and holistic, continuous assessment (Rahmadayanti & Hartoyo, 2022). Nevertheless, previous studies have consistently revealed a substantial gap between the ideals of the curriculum and the actual implementation of Islamic Religious Education (IRE) learning, particularly in terms of literacy, learning motivation, instructional methods, and assessment practices.

Regarding literacy, previous studies have consistently reported that elementary school students exhibit low reading interest. Hidayati et al. (2024) found that students' literacy skills remain limited due to insufficient reading materials and the lack of engaging literacy habituation programs. Similarly, Aryani et al. (2024) identified both internal and external factors contributing to low literacy interest, including excessive gadget use and the absence of structured literacy programs. Sumual et al. (2023) further reported a declining trend in reading interest among lower-grade elementary students amid the rapid expansion of digital technology. These findings are consistent with the needs analysis conducted in the present study, which revealed that students at SD Intensif Al-Musthofa demonstrate limited interest in reading and generally perceive reading as an obligation rather than a habitual learning activity. This condition affects Islamic Religious Education learning because teacher-centered instruction, particularly lecture-based teaching, requires adequate literacy skills to support students' understanding of instructional materials.

From the perspective of instructional methods, the Merdeka Curriculum promotes Project-Based Learning (PjBL) as an instructional strategy to foster critical thinking, creativity, and collaboration. Sari, Suryana, Bentri, and Ridwan (2023) demonstrated that the regular implementation of PjBL significantly enhances students' critical thinking and collaborative skills. Likewise, Zulhijrah et al. (2024) reported that integrating PjBL into elementary education positively increases students' active engagement in learning. However, Wardhani, Sugiyono, and Gunawan (2023) found that many teachers still encounter difficulties in implementing PjBL consistently, resulting in the continued dominance of lecture-based and direct instruction approaches. A similar situation was identified in the present study, where lecture-based teaching and direct instruction remain the predominant instructional methods despite the initial adoption of more student-centered approaches, such as Contextual Teaching and Learning (CTL) and discovery learning.

Learning motivation constitutes another significant challenge. A literature review by Adetya, Sakman, and Saefulloh (2022) concluded that elementary students' learning motivation is influenced by both internal factors, including self-efficacy, interest, and emotional intelligence, and external factors, such as teacher creativity, parental support, and instructional media. Nugrahani et al. (2025) further argued that meaningful learning experiences and learner autonomy are more effective in fostering intrinsic motivation than external rewards alone. Nevertheless, the needs analysis conducted at SD Intensif Al-Musthofa indicated that students' motivation remains highly dependent on external encouragement from teachers, creating the risk of declining learning engagement when such support is absent. This finding highlights a significant discrepancy, suggesting that intrinsic motivation must be deliberately cultivated through well-designed instructional strategies rather than developing naturally.

Assessment practices also remain inconsistent with the principles of the Merdeka Curriculum. A study conducted by STKIP Subang (2024) revealed that diagnostic assessment has not been optimally implemented due to teachers' limited competence in designing assessment instruments. Furthermore, formative assessment is frequently treated merely as periodic quizzes rather than as a continuous process for monitoring

students' learning progress. Similarly, Laulita (2022) reported that many elementary school teachers remain hesitant and insufficiently prepared to implement diagnostic assessment because of limited training and professional development opportunities. These findings correspond with those of the present study, in which Islamic Religious Education assessment at SD Intensif Al-Musthofa primarily emphasizes cognitive achievement through memorization and weekly tests, while diagnostic and formative assessments have not yet been systematically integrated into everyday classroom instruction.

The synthesis of previous studies and the findings of this research reveals a consistent gap between the expectations of the Merdeka Curriculum and current instructional practices. Although the curriculum emphasizes project-based learning, intrinsic motivation, and holistic assessment, classroom practices continue to rely heavily on conventional teaching methods, externally driven motivation, and cognitively oriented assessment. This gap is particularly noteworthy because SD Intensif Al-Musthofa already possesses adequate supporting resources, including LCD projectors, internet access, supplementary learning materials, collaborative learning spaces, and a positive school climate characterized by harmonious social interactions and the absence of bullying. Therefore, the primary challenge lies not in the availability of educational resources but in their effective pedagogical utilization. Moreover, previous studies have generally examined literacy, motivation, Project-Based Learning, or assessment independently, whereas limited research has integrated these components into a comprehensive framework for developing Islamic Religious Education based on a systematic school needs analysis.

Accordingly, this study aims to analyze the gap between the current implementation of Islamic Religious Education learning and the expectations of the Merdeka Curriculum at SD Intensif Al-Musthofa. Furthermore, it seeks to formulate and describe a differentiated project-based learning strategy integrated with digital learning media and diagnostic-formative assessment to optimize students' literacy, numeracy, intrinsic motivation, and social skills in a sustainable manner.

B. Research Method

This study employed a qualitative descriptive approach. According to Sugiyono (2018), qualitative descriptive research is designed to investigate phenomena in their natural settings, where the researcher serves as the primary research instrument, the collected data are predominantly narrative, and the analysis aims to describe the observed conditions without manipulating variables. This approach was selected because the study sought to obtain an in-depth understanding of the current implementation of Islamic Religious Education (IRE) learning at SD Intensif Al-Musthofa, compare it with the expected standards outlined in the Merdeka Curriculum, and formulate recommendations for instructional improvement based on the identified gaps.

The research was designed as a needs analysis, a systematic process used to identify discrepancies between the current condition and the desired condition, thereby providing a basis for developing appropriate and targeted instructional interventions. In this study, the needs analysis focused on examining various components of IRE learning, including students' characteristics, learning motivation, instructional methods, learning media, assessment practices, and the availability of educational facilities and infrastructure. The identified gaps were subsequently used as the foundation for formulating a differentiated Project-Based Learning (PjBL) strategy integrated with digital learning media and diagnostic-formative assessment to support the implementation of the Merdeka Curriculum.

C. Results and Discussion

Needs Analysis of Islamic Religious Education Learning at SD Intensif Al-Musthofa

Based on the results of observations, interviews, and document analysis compiled in the needs assessment matrix, the study identified findings across three main aspects: student characteristics, the learning process, and the school's facilities and infrastructure. These findings provide a comprehensive overview of the current implementation of Islamic Religious Education (IRE) at SD Intensif Al-Musthofa and serve as the basis for identifying gaps between existing practices and the learning

objectives of the Merdeka Curriculum. The identified gaps subsequently informed the development of recommendations for improving IRE learning through a differentiated Project-Based Learning (PjBL) approach integrated with digital learning media and diagnostic-formative assessment.

1. Student Characteristics

Aspect	Current Condition	Identified Gap
Literacy	Students show limited interest in reading and still perceive reading as an obligation.	Independent reading habits and a sustainable literacy culture have not yet been established.
Numeracy	Students demonstrate high enthusiasm for hands-on and enjoyable numeracy learning activities.	Students' numeracy potential has not been fully developed due to limited use of varied instructional methods
Learning Motivation	Students' learning motivation is primarily driven by teachers' guidance and appreciation.	Intrinsic motivation has not yet developed and may decline in the absence of external encouragement.
Social Skills	Students maintain harmonious relationships, and no bullying cases have been identified.	Collaboration and leadership skills have not yet been actively developed.

Needs analysis constitutes a crucial initial stage in instructional development, as it aims to identify the gap between the existing learning conditions and the desired educational outcomes. Based on the needs analysis conducted at SD Intensif Al-Musthofa, several gaps were identified in the implementation of Islamic Religious Education (IRE), particularly in instructional methods, learning media, assessment practices, and the utilization of school facilities and infrastructure. These findings indicate that although the implementation of IRE has begun to align with the principles of the Merdeka Curriculum, its execution remains suboptimal and requires more systematic instructional development.

Regarding instructional methods, teachers predominantly employ lecture-based teaching and direct instruction when delivering learning materials. Although these approaches remain useful for explaining fundamental concepts, their dominant use

results in teacher-centered learning. Consequently, students have limited opportunities to think critically, engage in discussions, solve problems, and construct their own understanding. While teachers have started to adopt student-centered approaches such as Contextual Teaching and Learning (CTL) and discovery learning, these methods have not yet been implemented consistently across different learning topics. This finding suggests that the transition toward student-centered learning still requires substantial improvement in both instructional planning and classroom implementation.

This instructional practice does not fully reflect the characteristics of the Merdeka Curriculum, which emphasizes active, contextual, and student-centered learning. In Islamic Religious Education, students are expected not only to acquire cognitive knowledge of Islamic teachings but also to internalize Islamic values through meaningful learning experiences. Therefore, instructional models that actively engage students throughout the learning process are needed to ensure that learning extends beyond content acquisition toward character development and the cultivation of twenty-first-century competencies.

With respect to learning media, the findings indicate that teachers primarily utilize conventional instructional media, including board games, spinning wheels, and make-a-match activities. These media contribute to enjoyable classroom interactions and encourage student participation. However, digital and interactive learning media have not been fully utilized despite the availability of adequate technological facilities. This finding reveals a gap between the school's technological capacity and its pedagogical application in classroom instruction.

The integration of digital learning media plays a significant role in supporting Islamic Religious Education in the digital era. The use of instructional videos, animations, interactive quizzes, and technology-based educational applications can facilitate students' understanding while increasing their engagement and motivation. Moreover, digital media can accommodate diverse learning styles, thereby enhancing the effectiveness of instruction. Consequently, greater integration of digital technology into IRE learning is necessary to support the innovative and adaptive learning environment promoted by the Merdeka Curriculum.

Assessment practices also require considerable improvement. The findings reveal that assessment remains dominated by memorization tasks, written examinations, and periodic evaluations of worship practices. These assessment methods primarily measure learning outcomes rather than supporting the learning process itself. In contrast, the Merdeka Curriculum positions assessment as an integral component of instruction through the implementation of diagnostic and formative assessment. Diagnostic assessment enables teachers to identify students' prior knowledge, learning characteristics, and instructional needs before learning begins, thereby providing a foundation for designing appropriate instructional strategies.

Formative assessment, meanwhile, is conducted continuously throughout the learning process to provide constructive feedback for both teachers and students. Through formative assessment, teachers are able to monitor students' learning progress and adjust instructional strategies whenever learning difficulties emerge. Therefore, strengthening the implementation of both diagnostic and formative assessment represents one of the most important priorities for improving the quality of Islamic Religious Education at SD Intensif Al-Musthofa.

The study further indicates that the school's facilities and infrastructure are generally adequate. LCD projectors, internet access, supplementary learning resources, and collaborative learning spaces are available and suitable for supporting instructional activities. Thus, the primary challenge does not concern the availability of educational resources but rather their limited pedagogical utilization. These facilities have considerable potential to support technology-enhanced learning, collaborative activities, student presentations, and innovative project-based learning experiences.

Overall the findings suggest that the development of Islamic Religious Education should be directed toward more active, contextual, and student-centered instructional approaches. One instructional model that aligns well with these needs is Project-Based Learning (PjBL), as it enables students to learn through authentic projects connected to real-life situations. This approach encourages the development of critical thinking,

creativity, communication, collaboration, and problem-solving skills while promoting independent learning (Thomas, 2000; Krajcik & Blumenfeld, 2006; Bell, 2010).

Furthermore the implementation of Project-Based Learning (PjBL) should be integrated with differentiated instruction to accommodate students' diverse characteristics, interests, and learning abilities. The incorporation of interactive digital learning media alongside diagnostic and formative assessment throughout the instructional process is equally essential. Through this integrated approach, Islamic Religious Education is expected not only to improve students' mastery of religious knowledge but also to foster intrinsic motivation, strengthen literacy and numeracy competencies, enhance social skills, and support the development of the Pancasila Student Profile, one of the primary goals of the Merdeka Curriculum (Tomlinson, 2017; Ministry of Education, Culture, Research, and Technology, 2022; Bell, 2010).

2. Islamic Religious Education (IRE) Learning Process

Component	Current Condition	Identified Gap
Instructional Methods	Learning is predominantly conducted through lectures and direct instruction, although Contextual Teaching and Learning (CTL) and discovery learning have begun to be implemented.	Student-centered active learning has not yet been implemented consistently.
Learning Media	Learning primarily relies on conventional games (e.g., snakes and ladders, spinner, make-a-match, etc.).	Digital and interactive learning media have not yet been integrated into classroom instruction.
Assessment	Weekly assessments mainly consist of memorization, written tests, and practical activities.	Diagnostic assessment at the beginning of learning and integrated daily formative assessment have not yet been implemented.

The results of the needs analysis indicate that the implementation of Islamic Religious Education (IRE) at SD Intensif Al-Musthofa still exhibits several gaps between current instructional practices and the learning characteristics expected under

the Merdeka Curriculum. These gaps are evident in instructional methods, learning media, assessment practices, and the utilization of school facilities and infrastructure. Although several innovative instructional approaches have begun to be adopted, their implementation remains inconsistent and has not yet reached an optimal level.

Regarding instructional methods, the analysis revealed that learning is still predominantly delivered through lecture-based teaching and direct instruction. These approaches remain relevant, particularly for explaining fundamental concepts or topics that require explicit teacher guidance. However, their dominant use results in teacher-centered instruction, limiting students' opportunities to actively participate in the learning process. Although teachers have started implementing Contextual Teaching and Learning (CTL) and discovery learning, these approaches have not yet been applied consistently across all learning topics. This finding suggests that the transition toward student-centered learning still requires further improvement in both instructional planning and classroom implementation.

Such instructional practices are not yet fully aligned with the principles of the Merdeka Curriculum, which emphasizes active, contextual, and student-centered learning. In Islamic Religious Education, students are expected not only to understand religious concepts cognitively but also to internalize Islamic values through authentic learning experiences. Therefore, teachers should expand the use of instructional models that encourage students to discuss, collaborate, solve problems, and connect learning materials with real-life situations (Ministry of Education, Culture, Research, and Technology, 2022).

With regard to learning media, the analysis found that teachers primarily utilize conventional instructional media, such as snakes-and-ladders games, spinning wheels, and make-a-match activities. These media contribute to an enjoyable classroom atmosphere and promote interaction among students. Nevertheless, digital and interactive learning media have not yet been utilized optimally. In fact, digital media can provide more engaging and flexible learning experiences that better accommodate the characteristics of today's learners. The integration of instructional videos, interactive

quizzes, simulations, and educational applications can enhance students' learning motivation while facilitating their understanding of abstract concepts (Mayer, 2021).

The use of digital media also supports the implementation of differentiated instruction by enabling teachers to provide diverse learning resources that accommodate students' varying needs, interests, and abilities. Therefore, technology should not merely function as a tool for delivering instructional content but also as a means of creating more effective, innovative, and student-centered learning experiences.

Regarding assessment, the findings indicate that evaluation practices are still dominated by weekly assessments consisting of memorization, written tests, and practical activities. These assessment methods primarily focus on measuring learning outcomes rather than monitoring students' learning processes. In contrast, the Merdeka Curriculum emphasizes the implementation of diagnostic assessment before instruction and formative assessment throughout the learning process. Diagnostic assessment aims to identify students' prior knowledge, learning readiness, and instructional needs, enabling teachers to design learning activities that are appropriate for students' characteristics. Meanwhile, formative assessment provides continuous feedback that allows teachers to improve instructional strategies while helping students monitor their own learning progress (Ministry of Education, Culture, Research, and Technology, 2022).

The limited implementation of diagnostic and formative assessment indicates that assessment has not yet been fully utilized as an integral part of the learning process. Continuous assessment enables teachers to provide learning experiences that better accommodate students' needs while improving overall learning outcomes.

In addition to instructional practices, the analysis also revealed that the facilities and infrastructure at SD Intensif Al-Musthofa are generally adequate. Essential facilities, including LCD projectors, internet access, supplementary learning resources, and collaborative learning spaces, are available and suitable for supporting instructional activities. These findings indicate that the school possesses sufficient resources to support innovative and technology-enhanced learning.

The primary gap identified does not concern the availability of facilities but rather their limited utilization. Existing resources have not been fully optimized to support active, collaborative, and technology-based learning as envisioned by the Merdeka Curriculum. For instance, LCD projectors are mainly used for presentations, although they could also facilitate instructional videos, interactive simulations, and student project presentations. Similarly, collaborative learning spaces could be more effectively utilized for group discussions, presentations, and project-based learning activities that promote communication and collaboration skills.

Overall, the findings suggest that the main challenge in Islamic Religious Education at SD Intensif Al-Musthofa is not the lack of educational resources but the optimization of instructional strategies and the effective utilization of existing facilities. Therefore, instructional development should focus on integrating active learning models, digital learning media, and assessment practices that emphasize the learning process. One instructional model that is particularly suitable is Project-Based Learning (PjBL) because it integrates contextual, collaborative, and authentic learning experiences. The implementation of this model is expected to optimize the use of school facilities while increasing students' active engagement in learning, thereby supporting the effective implementation of the Merdeka Curriculum (Thomas, 2000; Bell, 2010; Ministry of Education, Culture, Research, and Technology, 2022).

3. Facilities and Infrastructure

All major facilities, including LCD projectors, internet access, supplementary learning resources, and collaborative learning spaces, are available and in adequate to good condition. The identified gap lies not in the availability of these facilities but in their limited utilization to support active, collaborative, and technology-enhanced learning.

The needs analysis indicates that the facilities and infrastructure supporting Islamic Religious Education (IRE) at SD Intensif Al-Musthofa are generally adequate. Essential resources such as LCD projectors, internet access, supplementary learning materials, and collaborative learning spaces are available and meet the basic requirements for implementing innovative learning. The availability of these facilities

demonstrates that the school possesses sufficient potential to support learning practices aligned with the principles of the Merdeka Curriculum.

The findings further reveal that the primary challenge does not concern the availability of facilities but rather their suboptimal utilization. LCD projectors and internet access have not been fully utilized as interactive digital learning media. Likewise, collaborative learning spaces have not been used extensively to facilitate discussions, presentations, or project-based learning activities that encourage students' active participation. As a result, the existing facilities have not yet contributed optimally to improving the quality of the learning process.

Within the implementation of the Merdeka Curriculum, facilities and infrastructure serve not merely as supporting resources but as essential components for creating active, collaborative, contextual, and technology-enhanced learning environments. Therefore, optimizing the use of school facilities should become a priority so that instruction is no longer dependent solely on conventional teaching methods but also takes advantage of the wide range of available digital learning resources. Utilizing LCD projectors to display instructional videos, employing internet resources for learning activities, and using collaborative spaces for discussions and presentations can significantly enhance students' engagement in the learning process (Ministry of Education, Culture, Research, and Technology, 2022).

The optimization of facilities and infrastructure should also be supported by improving teachers' competence in integrating educational technology into classroom instruction. Teachers are expected not only to operate technological devices effectively but also to incorporate them into instructional strategies that are aligned with learning objectives. Consequently, the available facilities can be fully utilized to support innovative, student-centered learning and improve learning outcomes in accordance with the characteristics and objectives of the Merdeka Curriculum (Mayer, 2021; Ministry of Education, Culture, Research, and Technology, 2022).

Learning Gaps in Islamic Religious Education (PAI) at SD Intensif Al-Musthofa as the Basis for Developing Project-Based Learning (PjBL)

1. Low Literacy Interest Despite Adequate Facilities

Students' literacy interest at SD Intensif Al-Musthofa remains relatively low despite the availability of adequate supporting facilities, such as book collections, libraries, and various learning resources. This condition indicates that low reading interest is not solely caused by limited access to learning materials but is more closely related to the lack of optimal literacy habituation strategies implemented within the school environment. Consequently, the availability of adequate learning resources has not yet been able to establish reading habits as an integral part of students' learning activities.

This condition is consistent with the findings of Hidayati et al. (2024) and Aryani et al. (2024), who stated that low literacy interest among elementary school students is more influenced by the lack of engaging, sustainable, and age-appropriate reading habituation programs rather than by the limited availability of reading materials (Hidayati et al., 2024; Aryani et al., 2024). Furthermore, Sumual et al. (2023) explained that the rapid development of digital technology has contributed to declining reading interest among elementary school students, as children tend to be more attracted to visual media and digital entertainment than printed books (Sumual et al., 2023). This demonstrates that strengthening literacy culture requires more innovative approaches beyond merely providing facilities.

Unlike previous research findings, the literacy issue at SD Intensif Al-Musthofa is not caused by insufficient learning resources but rather by the suboptimal implementation of literacy programs within the school environment. Therefore, efforts to improve literacy should be directed toward developing contextual and enjoyable reading habituation activities, such as reading Islamic exemplary stories before lessons, establishing classroom reading corners, or integrating reading activities into PAI learning projects. These strategies are expected to foster reading habits while increasing students' engagement in the learning process.

The improvement of literacy culture will also positively influence PAI learning. Students who are accustomed to reading will find it easier to understand learning materials, interpret Islamic sources, and connect learned concepts with everyday life. This condition will reduce students' dependence on teacher explanations, allowing

teachers to function more as facilitators rather than the sole source of information. Thus, strengthening literacy culture not only improves reading skills but also supports the development of active, meaningful, and student-centered PAI learning in accordance with the principles of the Merdeka Curriculum (Ministry of Education, Culture, Research, and Technology, 2022).

2. Untapped Potential of Numeracy Skills

Students' enthusiasm toward practice-based numeracy learning represents one of the potentials possessed by SD Intensif Al-Musthofa. Students demonstrate greater activity when learning is connected with real-life activities compared to when concepts are presented abstractly. This condition indicates that numeracy has significant potential to be developed through a more contextual approach, enabling students not only to understand concepts but also to apply them in real situations.

This condition is supported by various studies indicating that contextual approaches and educational games can improve students' learning motivation and numeracy understanding at the elementary school level. Learning activities that connect mathematical concepts with daily experiences enable students to understand materials more easily because they can recognize the direct benefits of the concepts being studied. Furthermore, the use of game-based media, such as buying and selling simulations, board games, and simple problem-solving activities, has been proven to increase students' involvement in the learning process (Fitriani et al., 2023; Putri & Zanthi, 2022).

However, this potential has not yet been optimally utilized in PAI learning. In fact, many PAI materials have strong connections with numeracy skills, including zakat calculations, inheritance distribution (faraidh), Islamic transactions, prayer time calculations, and the determination of the Hijri calendar. Integrating numeracy into these materials can help students understand religious concepts more concretely while developing logical thinking and problem-solving skills. Therefore, numeracy should not only be positioned as a competency within mathematics but also as a skill that supports contextual understanding of Islamic Religious Education.

The utilization of numeracy potential can be further optimized through Project-Based Learning (PjBL). This learning model enables students to complete projects related to real-life contexts, such as calculating professional or wealth-based zakat through simple case studies, developing simulations of Islamic transactions, or creating worship activity calendars. Through these activities, students not only master numeracy concepts but also develop critical thinking, collaboration, communication, and problem-solving skills, which are essential competencies in the Merdeka Curriculum (Thomas, 2000; Bell, 2010).

3. Dependence on Extrinsic Motivation

Students' learning motivation at SD Intensif Al-Musthofa is still predominantly influenced by external encouragement, such as teacher guidance, rewards, and other forms of reinforcement. This condition indicates that students' involvement in PAI learning remains highly dependent on the teacher's role as the primary driver of the learning process. As a result, students tend to wait for instructions before engaging in learning activities and have not fully developed the initiative to learn independently.

This condition aligns with the research findings of Adetya, Sakman, and Saefulloh (2022), who stated that elementary students' learning motivation is influenced by a combination of internal and external factors. At the elementary level, external factors such as teacher creativity, rewards, and learning environment support remain significant factors in encouraging students' enthusiasm for learning (Adetya, Sakman, & Saefulloh, 2022). This demonstrates that teachers continue to play an important role in creating learning environments capable of stimulating students' motivation.

Nevertheless, excessive dependence on extrinsic motivation may hinder the development of students' intrinsic motivation. Nugrahani et al. (2025) explained that intrinsic motivation is more effectively developed through meaningful learning experiences, opportunities for students to make choices, and active involvement in the learning process rather than merely through rewards or punishments (Nugrahani et al., 2025). Therefore, learning approaches that provide opportunities for exploration, collaboration, and problem-solving are more effective in developing students' responsibility and independence.

Based on this condition, PAI learning at SD Intensif Al-Musthofa needs to be directed toward strategies that shift learning orientation from teacher-dependent instruction toward student-centered learning. One relevant alternative is the implementation of Project-Based Learning (PjBL), as this model provides opportunities for students to determine learning strategies, collaborate with peers, and produce learning products based on real experiences. Thus, learning motivation will no longer depend solely on teacher-provided rewards but will emerge from active participation, curiosity, and satisfaction in completing learning projects (Thomas, 2000; Bell, 2010).

4. Dominance of Conventional Methods Amid the Demands of the Merdeka Curriculum

PAI learning at SD Intensif Al-Musthofa is still dominated by lecture methods and direct instruction, although teachers have begun implementing Contextual Teaching and Learning (CTL) and discovery learning approaches. This condition indicates that student-centered learning has not yet been fully implemented. Meanwhile, the Merdeka Curriculum emphasizes active, contextual learning that provides opportunities for students to construct knowledge through meaningful learning experiences. The dominance of conventional methods may limit students' involvement in learning activities and reduce opportunities to develop critical thinking, creativity, communication, and collaboration skills.

This condition is consistent with the research of Wardhani, Sugiyo, and Gunawan (2023), who found that teachers' ability to consistently implement Project-Based Learning (PjBL) remains a challenge, even though teachers theoretically understand the characteristics of learning within the Merdeka Curriculum (Wardhani, Sugiyo, & Gunawan, 2023). Furthermore, Sari et al. (2023) and Zulhijrah et al. (2024) demonstrated that consistent implementation of PjBL can improve students' active engagement, critical thinking abilities, creativity, and collaboration during learning activities (Sari et al., 2023; Zulhijrah et al., 2024). This indicates that the methodological gap at SD Intensif Al-Musthofa is not caused by teachers' lack of understanding regarding innovative learning concepts, but rather by the inconsistent application of these models in daily classroom practices.

Therefore, PAI learning at SD Intensif Al-Musthofa needs to be directed toward more active and student-centered learning models, particularly through Project-Based Learning (PjBL). This model provides opportunities for students to explore real-world problems, collaborate in groups, and produce learning products related to the learning materials. Through sustainable implementation, PjBL is expected to reduce the dominance of lecture-based methods, increase student participation, and support the realization of learning practices aligned with the principles of the Merdeka Curriculum.

5. PAI Learning Media Not Yet Digitally Integrated

The availability of LCD/projectors and internet access at SD Intensif Al-Musthofa indicates that the school has adequate facilities to support technology-based learning. However, these facilities have not been optimally utilized as interactive learning media. The use of learning media is still dominated by conventional tools, such as snakes and ladders, spinners, and make a match activities, resulting in the potential of technology to create more engaging and contextual learning experiences not being fully utilized. This condition indicates the existence of a utilization gap, namely the disparity between the availability of technological infrastructure and its utilization in supporting the learning process.

Mayer (2021) explains that the integration of digital media designed based on multimedia learning principles can improve students' attention, motivation, and understanding compared to the use of conventional media alone (Mayer, 2021). Therefore, PAI learning needs to optimize the utilization of existing facilities through the use of instructional videos, interactive quizzes, educational applications, and digital learning platforms. The optimal utilization of digital media is expected to create learning experiences that are more active, engaging, contextual, and student-centered, in accordance with the characteristics of the Merdeka Curriculum.

6. Assessment Still Oriented Toward Cognitive-Summative Measurement

The implementation of assessment in PAI learning at SD Intensif Al-Musthofa is still dominated by memorization activities, weekly tests, and learning outcome evaluations. This indicates that assessment is still oriented toward measuring final achievement rather than functioning as an integral part of the learning process. In fact,

the Merdeka Curriculum emphasizes the importance of diagnostic assessment to identify students' learning readiness and formative assessment conducted continuously to provide feedback for teachers and students throughout the learning process.

This finding is consistent with the studies conducted by STKIP Subang (2024) and Laulita (2022), which stated that the implementation of diagnostic and formative assessments in PAI learning at various elementary schools still faces several challenges, particularly related to teachers' understanding in developing assessment instruments and the tendency to equate assessment with daily tests (STKIP Subang, 2024; Laulita, 2022). Therefore, strengthening teachers' competence in designing and implementing diagnostic and formative assessments is an important step to ensure that assessment does not merely function as a tool for evaluating learning outcomes but also serves as a basis for improving learning strategies according to students' needs, as emphasized in the implementation of the Merdeka Curriculum.

7. Facilities, Yet Suboptimal Utilization

This discussion shows that SD Intensif Al-Musthofa has strong potential in supporting the implementation of PAI learning, both in terms of the availability of facilities and infrastructure, a conducive social environment, and students' enthusiasm toward practice-based learning. However, these potentials have not been optimally utilized through the implementation of learning strategies, media utilization, and assessment practices that are aligned with the principles of the Merdeka Curriculum. This indicates that there is still a gap between the current learning conditions and the expected learning practices, particularly in realizing active, contextual, and student-centered learning.

The success of the Merdeka Curriculum implementation is not only determined by the availability of resources but also by teachers' pedagogical competence in optimizing these resources into meaningful learning experiences (Ministry of Education, Culture, Research, and Technology, 2022). Therefore, the various gaps identified in this study become the basis for recommending the implementation of differentiated Project-Based Learning (PjBL) integrated with differentiated learning approaches in PAI learning. This model is expected to increase students' active

engagement, optimize the utilization of facilities and infrastructure, and support the achievement of the Merdeka Curriculum objectives through more innovative, contextual, and student-centered learning.

D. Conclusion

Based on the results of the needs analysis conducted at SD Intensif Al-Musthofa, it can be concluded that there is a consistent gap between the current learning conditions and the ideal demands of the Merdeka Curriculum in three main aspects. First, in terms of students' characteristics, students demonstrate low literacy interest but show high enthusiasm toward practice-based numeracy learning. Meanwhile, students' learning motivation in PAI learning is still largely dependent on external encouragement from teachers and has not yet developed into intrinsic motivation, although students' social skills are already in a conducive and harmonious condition. Second, in terms of the PAI learning process, lecture methods and direct instruction remain dominant. The learning media used are still dominated by conventional games that have not been integrated with digital technology, while assessment practices remain oriented toward cognitive-summative aspects without incorporating diagnostic and formative assessments as integrated components in daily PAI learning. Third, in terms of facilities and infrastructure, the school already possesses complete and high-quality facilities; however, their utilization has not yet been optimized to support active and collaborative PAI learning.

These findings emphasize that the main problem does not lie in limited resources, but rather in the lack of optimization of pedagogical strategies and capacities in transforming available resources into active, meaningful, and student-centered learning experiences. Therefore, the implementation of differentiated Project-Based Learning enriched with digital media in PAI learning, accompanied by the strengthening of diagnostic and formative assessments regularly, becomes a relevant strategy to bridge these gaps. Furthermore, this approach represents the contribution of this research in providing a concrete framework as a basis for developing PAI learning at SD Intensif Al-Musthofa and other elementary schools with similar characteristics.

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