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STRENGTHENING INTERACTION IN ISLAMIC EDUCATION LEARNING THROUGH THE USE OF LEARNING MANAGEMENT SYSTEMS IN THE DIGITAL ERA

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ABSTRACT

This study aims to analyze the role of Learning Management Systems (LMS) in strengthening interaction in Islamic education learning within the digital era. The research focuses on how digital learning platforms facilitate communication, collaboration, and engagement between teachers and students in the learning process. This study employed a qualitative literature review, examining relevant studies, academic articles, and educational practices related to LMS implementation in Islamic education. Data were analyzed through thematic analysis to identify patterns, opportunities, and challenges in digital learning interaction. The findings indicate that the use of LMS significantly improves learning interaction through discussion forums, online assignments, feedback mechanisms, and flexible access to learning materials. In addition, LMS supports student-centered learning and encourages active participation in Islamic education classes. However, several challenges remain, including digital literacy gaps, limitations in technological infrastructure, and varying levels of teacher readiness. The study concludes that LMSs serve as effective digital learning platforms for enhancing interaction in Islamic education and recommends strengthening technological competence and institutional support to maximize learning outcomes in the digital era.

Keywords: *Learning Management System, Islamic Education, Learning Interaction, Digital Learning, Educational Technology.*

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INTRODUCTION

The development of digital technology has brought significant changes across various aspects of life, including education. Digital transformation not only affects how information is delivered but also changes the interaction patterns between teachers and students during the learning process (Oliveira & De Souza, 2022;Santos et al., 2019;Timotheou et al., 2023). In the context of Islamic education, the use of digital technology has become increasingly important to support effective learning, especially in addressing the challenges of the digital era that demand flexibility, accessibility, and broader interaction (Amorim et al., 2018). One of the technologies widely used in education is the Learning Management System (LMS). This digital-based learning platform enables the management of learning materials, communication, assessment, and interaction in online learning environments. (Almarashdeh et al., 2011).

The use of LMS in learning provides new opportunities to create a more interactive learning environment. LMS functions not only as a medium for distributing learning materials but also as a collaborative space that enables students to interact with teachers and peers through discussion forums, online assignments, quizzes, and communication features (Kerimbayev et al., 2017). In Islamic education, learning interaction plays an important role because the learning process is not merely oriented toward knowledge transfer but also toward the internalization of moral, spiritual, and Islamic character values (Bradley, 2021;Hidayati & Slamet, 2025). Therefore, LMS should be understood not only as a technological tool but also as a pedagogical medium capable of strengthening the quality of learning interaction. (Moore, 1989).

The urgency of this study stems from the increasing use of digital technology in education, which has not been fully balanced by in-depth research on the effectiveness of learning interactions, particularly in the context of Islamic education (Baihaqi et al., 2026;Syakhrani, 2026). Most previous studies have focused on technological effectiveness, user satisfaction, or general learning outcomes, while research specifically discussing the strengthening of learning interaction through LMS in Islamic education remains limited (Ghazal et al., 2018). In fact, learning interaction is one of the important indicators in determining the success of educational processes, especially in learning environments that emphasize character building and the reinforcement of religious values. (Al-Attas, 1999).

Furthermore, implementing LMS in Islamic education faces several challenges, including limited digital literacy, teacher readiness, access to technology, and adaptation to digital teaching methods. These conditions highlight the need for research that explains how LMS can be optimally utilized to create effective learning interactions (Benabbes et al., 2023;Cerezo et al., 2016). This study is important because it provides an overview of the dynamics of LMS use in Islamic education while identifying opportunities and challenges arising in digital learning processes (Selwyn, 2016).

This study aims to analyze the role of Learning Management Systems in strengthening interaction in Islamic education learning in the digital era. It also seeks to examine how LMSs can increase student engagement, facilitate teacher-student communication, and support collaborative learning grounded in Islamic values (Indri & Adnan, 2026).

Therefore, this research is expected to contribute theoretically to the development of technology-based Islamic education studies and enrich perspectives on interactive digital learning. Theoretically, this research strengthens the concept of learning interaction in Islamic education by integrating digital technology approaches (Baihaqi et al., 2026). This study supports social constructivism theory, which emphasizes the importance of interaction in the learning process, where students construct knowledge through communication and collaboration (Zanjani, 2017). LMS serves as a medium capable of facilitating this process effectively, particularly in distance learning and blended learning contexts. (Watson & Watson, 2007).

On the practical side, this study also contributes to teachers, educational institutions, and Islamic education policymakers by underscoring the importance of integrating LMSs as learning media. The findings are expected to serve as a basis for designing digital learning strategies that are not only technology-oriented but also capable of strengthening the quality of learning interaction. Thus, the use of LMS in Islamic education can become an innovative solution to address learning challenges in the digital era.

METHODS

This study employed a qualitative research approach, using a literature review, to examine the role of Learning Management Systems (LMS) in strengthening interaction in Islamic education in the digital era. The qualitative approach was selected because it enables an in-depth understanding of concepts, perspectives, and findings from diverse academic sources on digital learning and Islamic education. Literature review research is appropriate for identifying theoretical frameworks, examining previous studies, and analyzing trends and developments in LMS implementation within educational contexts. (Creswell, 2014).

The primary data sources in this study consisted of scientific journal articles, books, conference proceedings, and other relevant academic publications on Learning Management Systems, digital learning interactions, and Islamic education. Secondary data were obtained from supporting documents, policy reports, and educational technology studies that provide contextual understanding of LMS integration in learning processes. The selection of literature sources was based on relevance, publication credibility, and alignment with the research topic. (Snyder, 2019).

The research subjects in this study were not individuals or respondents but scholarly documents related to the implementation of LMS in education, particularly in Islamic education settings. The unit of analysis focused on concepts, findings, and themes related to learning interaction, digital pedagogy, student engagement, and technology integration in Islamic education. Through this approach, the study explored patterns of interaction facilitated by LMS platforms in various learning contexts.

The instrument used in this research was a documentation sheet designed to record, categorize, and analyze data from selected literature sources. This instrument enabled the researcher to identify relevant concepts, compare findings, and classify themes in line with the study's objectives. The documentation instrument included categories such as LMS features, forms of learning interaction, pedagogical implications, opportunities, and challenges in digital learning environments. (Krippendorff, 2018).

Data collection was conducted through systematic literature searching, source selection, document screening, and content classification. Relevant literature was collected from academic databases, books, and educational journals discussing LMSs and Islamic education. The collected documents were then reviewed and organized according to the research focus. (Patton, 1999).

Data analysis employed qualitative content analysis techniques. This analysis involved several stages: data reduction, categorization, interpretation, and conclusion drawing. First, relevant information was selected and reduced in line with the research objectives. Second, the data were categorized into themes related to LMS use and interaction in Islamic education. Third, thematic interpretation was conducted to identify relationships between digital learning practices and interaction quality. Finally, conclusions were drawn from recurring findings and conceptual relationships identified in the literature. (Bowen, 2009).

To ensure data validity, this study employed source triangulation by comparing findings across multiple academic sources. Credibility was enhanced by selecting peer-reviewed literature and recent publications relevant to digital learning and Islamic education. Through this methodology, the study aimed to provide a comprehensive understanding of how Learning Management Systems strengthen interaction in Islamic education in the context of the digital era.

RESULT AND DISCUSSION

RESULT

The findings of this study indicate that the implementation of Learning Management Systems (LMS) in Islamic education contributes significantly to strengthening interaction between teachers and students in digital learning environments. Based on the literature review conducted, LMS platforms facilitate various forms of interaction, including communication, collaboration, participation, and feedback mechanisms. These interactions become more flexible because learning activities are no longer limited by time and place constraints. (Martin & Bolliger, 2018).

The reviewed studies reveal that LMS platforms provide interactive features such as discussion forums, assignment submissions, quizzes, video conferencing integration, and messaging systems. These features encourage active participation among students and allow teachers to maintain instructional communication beyond conventional classroom settings. In Islamic education, these interaction patterns are essential because learning involves not only academic understanding but also moral guidance and character development .

The implementation of LMS also supports student-centered learning by enabling learners to access materials independently, engage in collaborative discussion, and participate in reflective activities. Students are encouraged to explore learning resources actively while teachers act as facilitators in guiding learning interaction. This shift demonstrates the evolving role of educators in digital environments. (Hrastinski, 2008).

The findings further indicate that LMS enhances communication quality through asynchronous and synchronous learning methods. Asynchronous interaction allows students to access materials and respond to discussion topics according to their own

schedules, while synchronous interaction enables real-time engagement between teachers and students. This combination contributes to more effective communication in Islamic education learning.

Table 1. The Contribution of LMS to Learning Interaction in Islamic Education

Aspect of Interaction	LMS Contribution	Educational Impact
Teacher–Student Communication	Discussion forums, messaging, announcements	Improved communication and instructional guidance
Student–Student Interaction	Group discussion, collaborative assignments	Increased collaboration and peer learning
Learning Material Access	Flexible digital access	Improved independent learning
Feedback Mechanism	Online grading and comments	Faster evaluation and learning improvement
Participation	Interactive activities and quizzes	Increased engagement and motivation

DISCUSSION

The findings demonstrate that Learning Management Systems serve as an effective medium for strengthening interaction in Islamic education learning. Interaction in education is considered a central component of successful learning because it facilitates communication, knowledge construction, and social engagement (Pandey & Pandey, 2009). In Islamic education, interaction becomes even more important due to its emphasis on moral formation, value internalization, and teacher guidance (Vygotsky, 1978).

The increased interaction facilitated by LMS aligns with social constructivism theory, which suggests that knowledge is developed through communication and collaboration. Through LMS features such as discussion forums and collaborative assignments, students actively engage in knowledge-sharing processes (Amorim et al., 2018;Ayubi & Retnowardhani, 2025). This finding supports the perspective that technology-based learning environments can enhance educational interaction when properly integrated into pedagogical practice.

The findings also correspond with Moore's theory of interaction, which identifies three primary forms of interaction in distance education: learner-content interaction, learner-instructor interaction, and learner-learner interaction. LMS platforms successfully accommodate these interaction types through digital tools that connect students, instructors, and educational resources (Oliveira & De Souza, 2022). Therefore, LMS contributes not only to content delivery but also to interactive learning experiences. (Weimer, 2013).

Furthermore, LMS implementation in Islamic education supports student-centered learning principles. Students are encouraged to become active participants rather than passive recipients of information (Timotheou et al., 2023). This aligns with modern educational approaches that emphasize learner autonomy, reflective thinking, and

collaborative engagement. In Islamic education, such interaction contributes to deeper understanding of religious concepts and encourages meaningful discussion (Santos et al., 2019).

However, the findings also reveal several challenges. Limited digital literacy among teachers and students may reduce LMS effectiveness. In some educational contexts, technological infrastructure limitations remain barriers to optimal implementation (Mohamed Hashim et al., 2022). Additionally, teachers may face difficulties in adapting traditional instructional approaches to digital learning environments. (Ng, 2012).

Previous studies also indicate similar results regarding LMS effectiveness in promoting communication and engagement. Research has shown that digital learning platforms improve student participation, provide greater accessibility to educational materials, and support continuous interaction outside the classroom. These findings strengthen the argument that LMS integration in Islamic education can contribute positively to learning quality.

The results of this study answer the research objective by demonstrating that LMS strengthens interaction in Islamic education learning through communication, collaboration, feedback, and active participation. This indicates that digital technology does not replace educational interaction but rather enhances and expands opportunities for meaningful engagement.

The practical implication of this study is the need for educational institutions to improve teacher digital competence and provide adequate technological infrastructure. Policymakers should also support the integration of LMS in Islamic education by developing digital learning strategies and training programs. These efforts can ensure that LMS implementation contributes effectively to educational quality in the digital era.

CONCLUSION

The findings of this study demonstrate that the use of Learning Management Systems (LMS) plays an important role in strengthening interaction within Islamic education learning in the digital era. LMS platforms facilitate communication between teachers and students, encourage collaborative learning, and support flexible access to educational resources. Through various digital features such as discussion forums, online assignments, feedback systems, and communication tools, LMS contributes to creating more interactive and student-centered learning environments. In Islamic education contexts, these interactions are essential not only for academic understanding but also for reinforcing moral values, reflective learning, and meaningful teacher guidance.

This study also reveals that LMS implementation aligns with contemporary educational theories emphasizing interaction, collaboration, and learner autonomy. The integration of LMS supports social constructivist learning by allowing students to actively engage in discussion, knowledge-sharing, and collaborative activities. Furthermore, the use of LMS strengthens the continuity of learning beyond classroom limitations, making educational interaction more dynamic and accessible.

However, several challenges remain in the effective implementation of LMS in Islamic education, including digital literacy gaps, technological infrastructure limitations, and varying levels of teacher readiness. These factors indicate that technological integration alone is insufficient without institutional support and professional development. Therefore, educational institutions are encouraged to provide training programs, technological resources, and strategic policies that promote effective digital learning practices.

Based on these findings, future researchers are recommended to conduct empirical studies involving direct observation, interviews, or surveys to explore LMS interaction in specific Islamic education contexts. Further research may also compare different LMS platforms or examine the relationship between LMS usage and student learning outcomes. Such studies can contribute to strengthening the theoretical and practical understanding of digital learning interaction in Islamic education.

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