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MANAGEMENT INFORMATION SYSTEMS AS AN INSTRUMENT OF EDUCATIONAL SUPERVISION FROM AN ISLAMIC PERSPECTIVE: A LIBRARY RESEARCH STUDY

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Abstract

This study aims to examine Management Information Systems (MIS) as an instrument of educational supervision from an Islamic perspective by exploring its concept, development, and position in supporting modern Islamic education management. The background of this study stems from the suboptimal implementation of supervision in many schools, so that teachers have not received comprehensive professional guidance, resulting in low learning quality, while the need for accurate and accountable data continues to grow in the digital era. The method used is a library research approach, reviewing books, scholarly articles, theories, and expert views based on the criteria of relevance, currency of sources, and connection to supervisory practices in Islamic educational institutions. The findings show that educational supervision has evolved from a traditional inspection-based model toward clinical and collaborative supervision that is more humanistic, participatory, and responsive to teachers' needs. In this context, MIS functions as a supervisory instrument that supports the collection, processing, and presentation of teacher performance and learning process data in a fast, accurate, and transparent manner as a basis for decision-making and follow-up guidance. From an Islamic perspective, the use of MIS is aligned with the principles of amanah (trust), accountability, shura (consultation), ihsan (excellence), and continuous improvement (islah), so that supervision is not merely administrative but also serves as a strategy for professional development, strengthening Islamic values, and improving educational quality. In conclusion, MIS is a strategic instrument of educational supervision that bridges the planning, implementation, and evaluation of learning, thereby supporting the realization of adaptive, professional Islamic educational institutions grounded in Islamic values.

Keywords: *Management Information Systems, Educational Supervision, Islamic Perspective, Library Research, Islamic Education Management.*

INTRODUCTION

Developments in information and communication technology have changed the governance of educational institutions. Educational institutions are required to manage data, learning processes, and the performance of educators faster, more accurately, more transparently, and more accountably. In educational management, one relevant approach is the Management Information System (MIS), a system that integrates the collection, processing, storage, and presentation of information to support organizational planning, decision-making, control, and evaluation.

On the other hand, educational supervision plays a strategic role in improving the quality of learning. Supervision is understood as planned guidance activity to help teachers and school staff work effectively, both individually and in groups (Ma'sum et al., 2022). In Islamic education management, supervision is understood not only as administrative oversight but also as a guidance

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process that includes spiritual and moral dimensions. Therefore, supervision from an Islamic perspective differs from oversight that is merely technical.

Nevertheless, supervision practice in many educational units still tends to be administrative and formalistic and is not yet integrated with the school quality improvement cycle. In fact, effective supervision plays a significant role in improving teachers' pedagogical and professional competence through collaborative guidance and data-based decision-making. The use of digital systems in supervision has also been reported to improve data accuracy, transparency, and accountability, but its success depends greatly on the leadership and commitment of school management, because without such support technology-based supervision risks reverting to an administrative activity (Mawardi et al., 2026). This condition shows the need for supporting instruments that help principals and supervisors monitor, analyze, and follow up supervision results in a measurable way.

The urgency of this study lies in the need to combine information technology with Islamic values in supervision practice. Earlier research found that web-based academic supervision MIS makes it easier for school supervisors to carry out supervision, improves supervision results compared with previous periods, and offers a solution to limitations of distance, time, and the ratio of supervisors to teachers (Sanoto et al., 2022). Therefore, a study is needed that positions MIS as a supervision instrument that is managerially effective while also in line with Islamic principles.

In terms of literature review, supervision has developed from an inspection approach toward an approach that is more collaborative, constructive, and evidence-based. In the Islamic education context, supervision carried out humanistically and grounded in the values of trustworthiness (*amanah*), justice, and consultation (*musyawarah*) is reported to improve teacher professionalism and learning quality, although it is still constrained by supervisors' limited time and administrative burdens (Burhan & Manshur, 2026). Studies of MIS for supervision generally still focus on system development and the effectiveness of supervisors' performance. Based on the authors' search, studies that specifically integrate MIS as an educational supervision instrument from an Islamic perspective remain limited.

Based on this description, this study aims to analyze the concept, development, and position of Management Information Systems (MIS) as an instrument of educational supervision from an Islamic perspective through a library research approach. Theoretically, this study is expected to enrich the body of knowledge on Islamic education management, particularly the integration of information technology with Islamic values in supervision practice. Practically, the results are expected to serve as a reference for principals, supervisors, and managers of Islamic educational institutions in developing a supervision system that is accountable, data-based, and oriented toward teachers' professional guidance.

METHODS

This study uses a qualitative approach with a descriptive-analytical *library research* design, that is, research characterized as qualitative and descriptive and not involving field work (Abdurrahman, 2024). Planning began by formulating the problem and objectives of the study, namely examining Management Information Systems (MIS) as an instrument of educational supervision from an Islamic perspective, followed by searching, selecting, organizing, and integrating findings into a systematic report (Jaya et al., 2023). Because it is sourced from literature, this study has no field location and was carried out online through scholarly journal databases and digital libraries from August to October 2026. The subjects of the study are scholarly documents, not informants. The data sources consist of primary sources, namely books and journal articles that directly discuss educational supervision, MIS, and Islamic education management, and secondary sources, namely previous research results and supporting documents (Subagiya, 2023). Data were collected through documentation using the keywords "supervisi pendidikan", "sistem informasi manajemen", and "manajemen pendidikan Islam", then selected based on relevance, currency, and connection to supervision practice in Islamic educational institutions. The selected data were analyzed using *content analysis* in three stages. Data reduction was carried out by selecting and focusing information according to the aims of the study. Data presentation was carried out by grouping findings into thematic categories, namely the concept of supervision, the development of supervision models, the role of MIS in supervision, and Islamic

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values in supervision. Conclusions were drawn by synthesizing those categories, while data validity was maintained by comparing information from various sources.

DISCUSSION

The Concept and Development of Educational Supervision from an Islamic Perspective

Educational supervision is an important part of educational management that aims to develop teachers' professionalism and improve learning quality. Its implementation focuses not only on checking administration but also includes observing learning, giving guidance, evaluating, and following up on improvements. Addini et al. (2022), in the article *Basic Concepts of Educational Supervision*, discuss the definition, principles, aims, and functions of supervision as part of efforts to improve teachers' professionalism. This thinking shows that supervision needs to be understood as a continuous guidance process, not merely an activity to assess the completeness of documents. In line with this, Milasari et al. (2021) examine the principles, styles, and communication in educational supervision, including Islamic educational supervision. Both studies show that the success of supervision is determined not only by the accuracy of assessment but also by the supervisor's ability to build professional communication with teachers. Thus, supervision needs to be directed toward a guidance relationship that encourages teachers to recognize their shortcomings, develop their abilities, and improve the learning process step by step.

The development of educational supervision shows a need to shift from an approach that emphasizes checking toward one that is more collaborative and suited to teachers' needs. In a guidance approach, teachers are not only the party being assessed but are also involved in discussing learning problems and determining improvement steps. From an Islamic perspective, this process can be linked to the values of *amanah*, justice, and responsibility in carrying out educational duties. That is, supervisors need to convey observation results objectively, give constructive input, and avoid assessments based only on personal assumptions. Based on a synthesis of these studies, Islamic educational supervision can be understood as a professional guidance process that combines performance assessment with respect for teachers' dignity. Therefore, the change in supervision approach needs to be visible in practice, especially through two-way communication, clear feedback, and follow-up suited to learning needs.

The Concept and Position of Management Information Systems as an Instrument of Educational Supervision

A Management Information System (MIS) is a system that supports data management through the collection, processing, storage, and presentation of information to help carry out management and decision-making. In education, an MIS can be used to manage information on teachers, learning plans, supervision schedules, observation results, evaluations, and follow-up guidance. Sanoto, Paseleng, and Kusuma (2022) examine a website-based academic supervision management information system as a way to improve school supervisors' performance. The study shows the potential of website-based systems to help carry out supervision, especially when supervisors face limitations of distance and time. Meanwhile, Azrafiandi and Agustin (2023) discuss the use of an education management information system to support principals' decision-making. Both studies show that systematic information management can help carry out managerial duties. In the context of supervision, well-organized information can become a basis for recognizing guidance needs and determining more appropriate actions.

The position of MIS in educational supervision is as a supporting instrument that connects information with decision-making and teacher guidance. Through a system designed to fit needs, supervisors can review previous supervision results, identify aspects of learning that need improvement, and monitor the implementation of follow-up. Nevertheless, using an MIS does not mean the whole supervision process must depend on digital data. Recorded information still needs to be checked and interpreted based on real conditions in the school or madrasah. For example, incomplete learning documents do not necessarily prove that a teacher is not competent, because the supervisor needs to know the causes and context of the problem. Therefore, an MIS must be used together with direct observation, professional dialogue, and the supervisor's judgment. In Islamic education management, this position is important so that technology use not only

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improves administrative efficiency but also supports guidance decisions that are fair, objective, and accountable.

The Role of Management Information Systems in Supporting the Effectiveness of Educational Supervision

An MIS can support the effectiveness of supervision from the planning and implementation stages through to evaluation. At the planning stage, available information can help supervisors prepare schedules, determine observation focus, and recognize guidance needs based on previous supervision results. Filmawati et al. (2023) examine a web-based application-assisted academic supervision model for developing Islamic Religious Education (PAI) teachers' competence. The study shows the relevance of using digital applications to support academic supervision. Subsequently, Rhistiani, Kusumaningsih, and Nurkolis (2025) discuss the development of the web-based academic supervision application SUAMIC in elementary schools. The development includes user management, supervision recapitulation, and communication tools. These two studies show that technology can help organize the supervision process so that it is more structured. However, the effectiveness of its application still depends on the fit of the system with the institution's needs, the quality of the information entered, and users' ability to use the results.

At the implementation and follow-up stage, an MIS can help store observation results, record supervisors' input, and monitor progress after guidance is given. This information lets supervisors know whether problems found earlier have improved or still need assistance. However, stored data will not give meaningful benefit if used only to fulfill administrative obligations. Information must be analyzed to determine guidance priorities, prepare improvement steps, and evaluate changes in the learning process. In addition, the assessment of teachers needs to consider actual learning practice, not only the completeness of digital documents. Based on this synthesis, the effectiveness of an MIS in educational supervision can be seen from its ability to help supervisors make more directed plans, provide guidance according to need, and ensure that follow-up proceeds continuously. Thus, the success of MIS use is measured not only by the speed of report preparation but also by the benefit of the information for improving learning quality.

Integrating Management Information Systems with Islamic Principles in Educational Supervision

Integrating MIS with Islamic principles needs to begin from the understanding that technology is a means of supporting the performance of duties, while the quality of its use is determined by the purposes and responsibility of its users. The principle of *amanah* requires supervisors and system managers to convey and manage information according to actual conditions. Meanwhile, accountability demands that the data used in performance assessment have a clear basis and can be accounted for. In practice, these principles can be applied by recording supervision results objectively, checking data accuracy, and limiting the use of information to guidance needs. Analytically, data that are inaccurate or used without considering context can produce unfair assessments of teachers. Therefore, MIS use in Islamic education needs to be accompanied by responsible information governance so that technological efficiency remains in line with ethical values and professionalism.

The principle of consultation (*musyawarah*) can be applied by involving teachers in discussing supervision results and determining improvement steps. The data available in an MIS should be used as material for dialogue between supervisor and teacher, not as a basis for one-sided assessment without giving teachers the opportunity to explain the conditions they face. This approach is in line with the importance of communication and professional relationships in Islamic educational supervision discussed by Milasari et al. (2021). In addition, the principle of *ihsan* encourages supervisors and teachers to carry out their duties earnestly and continually strive to improve the quality of their work. In the context of MIS use, this principle can be realized through constructive feedback, evidence-based assessment, and willingness to correct shortcomings. Thus, integrating Islamic values is not enough through providing digital applications; it needs to be visible in how information is discussed, decisions are made, and guidance is carried out.

The principle of continuous improvement, or *islah*, can be applied by making supervision results the basis for improving learning step by step. Frawina and Iqbal (2025), in a study on the use of digital technology in supervising Islamic Religious Education learning, discuss the use of digital supervision platforms as well as the challenges of implementation, such as limited

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infrastructure, digital literacy, and data security. The study is relevant to affirm that technology use needs to be accompanied by efforts to improve the system and the readiness of users. In application, an MIS can help record problems found, prepare follow-up plans, and document progress after guidance is given. However, the success of *islah* is not determined merely by the completion of administrative reports but needs to be seen from real changes in the learning process. Therefore, periodic evaluation and communication between supervisor and teacher remain necessary. Based on this synthesis, an MIS can be a means of supporting the application of *amanah*, accountability, *musyawarah*, *ihsan*, and *islah* when technology is used responsibly and oriented toward improving educational quality.

Challenges and Strategies for Developing Management Information Systems in Islamic Education Management

Applying MIS in educational supervision faces challenges in the form of limited infrastructure, differences in users' digital ability, irregular data entry, and systems that do not yet fully fit the institution's needs. Rosyida et al. (2024), in the article *Challenges and Opportunities of Applying Technology in Educational Supervision in the Digital Era*, discuss problems of infrastructure gaps, internet access, technological development, and the need for new skills in carrying out supervision. These findings show that applying technology is not enough by providing applications but also needs to consider the readiness of the institution and its human resources. Another challenge is the possibility that data are used only to meet reporting needs so that they are not utilized in teacher guidance. This condition can reduce the benefits of an MIS because the information collected is not translated into improvement steps. Thus, educational institutions need to identify obstacles to system implementation and ensure that the technology used truly supports supervision needs.

Strategies for developing an MIS can be carried out through user training, drafting clear work procedures, improving data quality, and periodic system evaluation. Syaddad (2026), through a study on the challenges and opportunities of transforming academic supervision of Islamic Religious Education teachers in the digital era, discusses the need to adapt supervision to technological developments without neglecting the values of Islamic education. Based on this thinking, principals, supervisors, teachers, and administrative staff need to understand the system's functions and their respective responsibilities in managing information. Institutions also need to regulate access authority and maintain data confidentiality so that information about teacher performance is not misused. In addition, the success of MIS implementation needs to be evaluated through accuracy of information, ease of use, regularity of supervision implementation, and continuity of guidance follow-up. These indicators are the result of analysis that can be used as a basis for evaluation, not the result of field measurement in this study. Thus, developing an MIS in Islamic education management needs to balance administrative efficiency, human resource readiness, information security, and the improvement of teacher professionalism.

CONCLUSION

Based on the results of the library research, Management Information Systems (MIS) have a strategic role as an instrument of educational supervision in supporting the improvement of learning quality, particularly in Islamic educational institutions. Educational supervision has developed from an inspection-oriented approach toward guidance that is more collaborative, communicative, and continuous. In this development, an MIS helps the collection, processing, storage, and presentation of supervision data in a more structured way so that it can be used as a basis for planning, evaluation, decision-making, and follow-up guidance of teachers.

This study shows that the success of MIS use is determined not only by the availability of technology but also by data accuracy, user competence, institutional readiness, and commitment to carrying out follow-up. From an Islamic perspective, MIS use needs to be grounded in the values of *amanah*, accountability, *musyawarah*, *ihsan*, and *islah* so that the supervision process runs objectively, responsibly, and in an improvement-oriented way. Thus, the contribution of this study lies in affirming that an MIS functions not only as an administrative tool but also as a means of supporting teachers' professional guidance grounded in Islamic values. The implication is that Islamic educational institutions need to develop MIS in a planned way through improving digital

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competence, responsible data management, and periodic evaluation of follow-up to realize supervision that is effective, adaptive, and sustainable.

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