

The Role of Educational Management Information Systems in Supporting Decision-Making and Enhancing the Quality of Islamic Educational Institutions: A Literature Review

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Abstract

The development of information technology has brought significant changes in the management of educational institutions, including Islamic educational institutions. This study analyzes the role of Educational Management Information Systems (EMIS) in supporting decision-making and enhancing the quality of Islamic educational institutions through a literature review approach. This study uses a library research method, examining scientific articles, books, and academic documents published within the last ten years. Data were collected through searches on various academic databases and analyzed using content analysis techniques, which include identification, classification, evaluation, and synthesis of research findings. The results of the study show that EMIS serves as a strategic information source that provides accurate, integrated, and real time data to support data-driven decision making. The use of EMIS helps Islamic educational institutions plan, implement, monitor, and evaluate educational programs more effectively, objectively, and accountably, while contributing to institutional quality through the optimization of academic, personnel, financial, facilities and infrastructure, and student service management. The effectiveness of EMIS implementation is influenced by data quality, human resource competence, leadership support, organizational culture, availability of technological infrastructure, and system integration. Unlike previous studies that discuss EMIS's role in decision-making or quality improvement separately, this study integrates both aspects specifically within Islamic educational institutions, an area still relatively underexplored. Therefore, optimizing EMIS requires strengthening data governance, improving digital literacy, and organizational commitment to building a data-driven decision-making culture. This study confirms that EMIS is a strategic instrument for sustainably improving the governance and quality of Islamic educational institutions.

Keywords: Data-Driven Decision Making, Education Quality, Educational Management Information System, Islamic Educational Institutions.

1. Introduction

The development of information technology has brought significant changes in the management of educational institutions, including Islamic educational institutions. The Educational Management Information System (EMIS) currently functions not only as an administrative tool but has developed into a strategic instrument in supporting data and information management to improve the effectiveness of educational governance. This is because EMIS is able to provide fast, accurate, and integrated information that is essential to the educational management process (Darwis & Mahmud, 2017).



In the context of educational management, decision-making is an important process that determines the direction of institutional policy, including in Islamic educational institutions, where management increasingly involves academic, financial, human resource, and educational service aspects. Decisions that are not data based have the potential to produce policies that are not well targeted. Therefore, information systems become an important instrument in supporting data-driven decision making, particularly as Islamic educational institutions face growing demands for transparency and accountability. Putera and Laxsniiky (2025) explain that the use of information systems in education can improve the quality of managerial decisions because they are able to present data that is more systematic, accurate, and easy to analyze.

Building on this, the need for information systems in Islamic educational institutions specifically is increasing along with the complexity of management that includes academic, financial, human resource, and educational service aspects. Farid and Aryani (2016) affirm that management information systems help institutional leaders identify problems, evaluate alternatives, and establish more effective and efficient decisions. In addition, the integration of information systems also strengthens transparency and accountability in the management of Islamic educational institutions.

Besides playing a role in decision-making, the Educational Management Information System also contributes to improving the quality of educational institutions (Tambunan et al., 2023). Harahap and Nasution (2026) show that the implementation of information systems is able to improve the effectiveness of planning, monitoring, and evaluation of educational programs through the availability of more valid and structured data. Thus, information systems become an important part of efforts to sustainably improve the quality of education.

Mukhtar et al. (2025) state that the use of information systems in Islamic educational institutions not only improves work efficiency but also strengthens institutional competitiveness through improving the quality of educational services. Information systems enable all stakeholders to obtain information quickly and accurately so as to support more responsive decision-making.

Although various studies have discussed the role of the Educational Management Information System in decision-making and improving education quality, most of these studies are still partial. Existing research tends to focus on only one aspect, namely either decision-making or quality improvement, without integrating both into a single unified analysis (Mukhibat & Istiqomah, 2021a, 2021b; Yusri, 2024). In addition, most studies are also still descriptive and implementation-focused in the context of general educational institutions, so studies that specifically highlight Islamic educational institutions are still relatively limited.

Research on the Educational Management Information System (EMIS) in Islamic educational institutions shows that information systems play an important role in supporting decision-making, transparency, and accountability of institutional management (Mubarak & Nurlaela, 2025; Najamudin, 2016; Ropik & Rosadi, 2025). On the other hand, other research highlights the contribution of Management Information Systems in improving education quality through more effective data management, administrative efficiency, and optimization of educational services (Pratama & Firdaus, 2024; Shobri, 2024). Nevertheless, these studies still tend to discuss the role of information systems partially, either from the aspect of decision-making or quality improvement separately. There are not yet many studies that specifically synthesize and integrate both aspects in the context of Islamic educational institutions. Therefore, a comprehensive literature review is needed to provide a more

complete understanding of the contribution of the Educational Management Information System in supporting decision-making as well as improving the quality of Islamic education.

Therefore, this study aims to conduct a literature review on the role of the Educational Management Information System in supporting decision-making and improving the quality of Islamic educational institutions. This study is expected to provide a conceptual contribution to the development of educational management science and become a reference for managers of Islamic educational institutions in optimizing the use of information systems more effectively and strategically.

2. Literature Review

2.1. Educational Management Information System (EMIS)

The Educational Management Information System (EMIS) is a system used to collect, process, store, and present information needed in the management process of educational institutions. EMIS functions as a management support tool in providing accurate, relevant, and timely information so that it can help the process of planning, organizing, implementing, and supervising education. In the context of Islamic education, EMIS becomes an important instrument to integrate various academic, financial, human resource, and educational service data in order to improve the effectiveness of institutional governance (Darwis & Mahmud, 2017). The development of information technology has driven a change in the function of EMIS from merely an administrative tool to a strategic instrument that supports data-driven decision making. Through an integrated system, educational institution managers can obtain information quickly so that they are able to respond to various organizational problems more effectively.

2.2. General System Theory

The System Theory proposed by Von Bertalanffy (1968) views an organization as a unified entity consisting of various components that interact with each other to achieve certain goals. In this perspective, the success of an organization is determined by the ability of each component to work in an integrated manner. This theory was selected as one of the two frameworks in this study because the effectiveness of EMIS cannot be explained by a single component alone, such as technology, but is instead the result of interaction among multiple organizational elements, a perspective that complements the DeLone and McLean model's focus on system, information, and service quality. In Islamic educational institutions, the use of EMIS involves various components such as information technology, human resources, data, leadership, and organizational structure. The performance of the information system is not only influenced by the quality of the technology used but also by the quality of the interaction between these components. Therefore, System Theory is relevant to explain the factors that support or hinder the effectiveness of EMIS use in decision-making and improving the quality of educational institutions.

2.3. DeLone and McLean Information System Success Model

The Information System Success Model developed by DeLone and McLean (2003) explains that the success of an information system is influenced by three main dimensions, namely system quality, information quality, and service quality. These three dimensions influence the level of system use and user satisfaction, which ultimately produces benefits for the organization. In the context of Islamic educational institutions, this model can be used to explain how the quality of EMIS contributes to the effectiveness of decision-making and the improvement of education quality. A system that is easy to use, accurate information, and good

service will encourage optimal use of the system so as to produce higher quality decisions and support the achievement of organizational goals.

3. Methods

This study uses a qualitative approach with a library research method. This method was chosen because the study aims to analyze, examine, and synthesize various results of previous research related to the role of the Educational Management Information System (EMIS) in supporting decision-making and improving the quality of Islamic educational institutions.

The data sources in this study consist of secondary data obtained from various scientific literature, such as national and international journal articles, proceedings, books, and other relevant scientific documents. The literature used is prioritized from indexed publications published within the last ten years in order to obtain up to date and relevant information.

The data collection process was carried out through literature searches on various academic databases, such as Google Scholar, Scopus, and Dimensions using keywords such as “Educational Management Information System”, “Educational Management Information System”, “decision-making”, “improving education quality”, and “Islamic educational institutions”. The literature obtained was then selected based on inclusion and exclusion criteria. Inclusion criteria include the suitability of the theme with the research focus, availability of complete manuscripts, and relevance to the context of educational management and Islamic educational institutions. Meanwhile, literature that is irrelevant, duplicate, or does not have adequate information is excluded from the analysis process.

Data analysis was carried out using content analysis techniques covering the stages of identification, classification, evaluation, and synthesis of findings from various sources. In the identification stage, the researcher inventoried relevant literature. Next, classification was carried out based on main themes, such as the role of EMIS in data management, support for decision-making, effectiveness of educational management, and its contribution to improving the quality of Islamic educational institutions. The results of the analysis were then synthesized to find patterns, similarities, differences, and tendencies of previous research results.

To maintain the validity of the study, a critical evaluation was conducted on each source used, considering the credibility of the author, the quality of the publication, the research methodology used, and the relevance of the findings to the focus of the study. Through this procedure, this study is expected to produce a comprehensive understanding of the contribution of the Educational Management Information System in supporting decision-making and improving the quality of Islamic educational institutions.

4. Results and Discussion

4.1. Educational Management Information System as a Strategic Information Source

The Educational Management Information System (EMIS) is an important instrument in supporting the management of Islamic educational institutions because it functions as a strategic information source that provides accurate, relevant, and timely data for policy makers. In a modern management perspective, information is an organizational asset that has strategic value equal to other resources, such as human, financial, and infrastructure resources. Therefore, the ability of educational institutions to manage information effectively will greatly determine the quality of planning, implementation, supervision, and evaluation of

educational programs. According to Najamudin (2016), EMIS acts as a system that integrates various educational data so that it can be used as a basis for policy formulation and more rational and objective decision-making. Information generated through a structured system helps Islamic educational institution leaders reduce dependence on assumptions or subjective experience in determining policy direction.

As a strategic information source, EMIS functions not only as a data storage medium but also as a mechanism that transforms raw data into information of value to the organization. Data on students, educators, curriculum, finances, and infrastructure that were previously scattered across various documents can be collected and processed into information that supports managerial needs. Amiruddin et al. (2023) explain that educational information systems have a main function in the process of collecting, processing, storing, and distributing information needed by educational management. Through this function, institutional leaders can obtain a comprehensive picture of the organization's condition so that they are able to identify problems and development opportunities more quickly and accurately.

The advantage of EMIS as a strategic information source lies in its ability to provide real time and integrated information. In the management of Islamic educational institutions, various decisions often have to be made quickly, such as determining budget allocation, placement of educators, development of learning programs, and evaluation of institutional performance. According to Farid et al. (2025), data integration in management information systems allows decision makers to access comprehensive information so that the analysis process can be carried out more effectively. The availability of integrated information also helps reduce data inconsistencies that often arise in manual administrative systems. Thus, the decisions produced have a higher level of accuracy and lower risk of error.

In the context of Islamic educational institutions, the existence of EMIS also supports the application of the principle of data-driven decision making. This approach places data and information as the main basis for determining organizational policy. Darwis and Mahmud (2017) affirm that the use of management information systems allows Islamic educational institutions to plan and evaluate programs more measurably because the entire process is based on well documented data. This is important considering that Islamic educational institutions currently face increasing demands for quality improvement, transparency, and accountability. With the support of EMIS, the decisions taken not only consider short term needs but also pay attention to the organization's long term strategic goals.

EMIS functions as a means of producing information that supports the monitoring and evaluation process. Information presented in the form of reports, statistics, and performance indicators enables institutional leaders to supervise the implementation of educational programs on an ongoing basis. Research by Sonia (2020) shows that the use of integrated information systems helps educational institutions carry out performance evaluations more systematically and objectively. Through a data-based evaluation process, leaders can determine the level of success of programs that have been implemented while formulating improvement strategies needed to achieve expected quality targets.

Besides providing benefits in managerial aspects, EMIS also contributes to improving the transparency and accountability of Islamic educational institutions. Data stored in the system can be traced back so that every decision taken has a clear and accountable information basis. Maulida (2025) found that the implementation of management information systems is able to improve the accountability of educational institutions through the provision of open, documented information that is easily accessible to interested parties. This information transparency not only strengthens organizational governance but also increases public trust in Islamic educational institutions as providers of educational services.

Nevertheless, the effectiveness of EMIS as a strategic information source still faces various challenges. Maulida (2025); Siregar and Lubis (2025); as well as Winarsih and Santoso (2025) argue that the quality of information produced by the system is greatly influenced by the quality of the data entered, user competence, and the readiness of information technology infrastructure. If the available data is incomplete or not regularly updated, the resulting information has the potential to mislead the decision-making process. In addition, low digital literacy among educational staff can also hinder optimal use of information. Therefore, the success of EMIS as a strategic information source is determined not only by the existence of technology but also by organizational commitment to building a culture of quality data management.

Based on the various research findings, it can be understood that EMIS holds a very important position as a strategic information source in Islamic educational institutions. This system functions not only as an administrative tool but also as a main foundation in providing information that supports the planning, organizing, implementing, supervising, and evaluating of educational programs. Through accurate, integrated, and easily accessible information, EMIS is able to improve the quality of decision-making while encouraging more effective, transparent Islamic educational institution governance that is oriented toward quality improvement.

4.2. Data-Driven Decision Making in Islamic Educational Institutions

Digital transformation in education management has driven a paradigm shift in decision-making from an intuition-based approach toward a data-driven decision-making approach. In Islamic educational institutions, decisions related to academic management, finance, human resources, and improving education quality require support from accurate and accountable information. Najamudin (2016) explains that the Educational Management Information System (EMIS) functions as a provider of information needed by decision makers so that the resulting policies have a more rational and objective basis. This finding is reinforced by Amiruddin et al. (2023) who state that educational information systems are a combination of human resources and information technology designed to collect, store, process, and distribute information to support the educational management decision-making process.

In the perspective of Islamic educational management, decision-making is not only understood as a process of choosing the best alternative but also as an effort to systematically solve organizational problems. Therefore, the quality of decisions greatly depends on the quality of the data used. Research by Farid et al. (2025) shows that the application of the Management Information System enables the decision-making process to follow the stages of intelligence, design, and choice as in the model developed by Herbert A. Simon. At the intelligence stage, data stored in the system is used to identify organizational problems. Next, at the design stage, this information is analyzed to produce various alternative solutions, while at the choice stage the system helps select the alternative most suitable for institutional needs. This approach makes decisions more measurable compared to decisions based only on individual experience or perception.

The importance of data in the decision-making process is also seen in the educational planning function. Through EMIS, Islamic educational institutions can access student, educator, curriculum, financial, and infrastructure data in an integrated manner. The availability of interconnected data between units enables institutional leaders to carry out needs analysis more comprehensively before establishing policy. Bakris and Nasution (2025) found that the implementation of management information systems is able to improve the quality of program planning because data can be accessed and analyzed systematically. Thus,

decision-making is no longer reactive to problems that arise but also proactive in designing institutional development strategies.

Besides supporting planning, the use of data also plays a role in the monitoring and evaluation process of educational programs. A good decision is determined not only by the quality of planning but also by the organization's ability to evaluate the results of policy implementation. In this context, EMIS provides various reports and performance indicators that enable institutional leaders to carry out ongoing supervision. Rismawati et al. (2024) show that the implementation of a technology based academic information system can improve the effectiveness of educational services because it facilitates the evaluation and control process of programs. This finding shows that data is used not only at the initial stage of decision-making but also becomes a main instrument in assessing the success of a policy.

Another aspect of concern in various studies is the contribution of data-driven decision making to the transparency and accountability of Islamic educational institutions. Purba et al. (2024) found that management information systems play a role in improving accountability through the provision of accurate, structured data that is easily accessible to stakeholders. In line with this, Ali and Solihat (2025) as well as Fairuzi (2025) affirm that the use of management information systems is able to increase the transparency of Islamic educational institution management because all administrative and reporting activities are systematically documented. This transparency is important to build public trust while ensuring that every policy taken has a clear and accountable information basis.

Nevertheless, various studies show that the implementation of data-driven decision making still faces a number of obstacles. Sudjiman and Sudjiman (2020) explain that the success of information systems in supporting decisions is greatly influenced by data quality, technology infrastructure readiness, and user competence. If the available data is incomplete or not regularly updated, the resulting decisions have the potential to be less accurate. In addition, Bakris and Nasution (2024) found that low data use culture in educational environments often causes information available in the system to not be used optimally. As a result, organizational decisions are still dominated by personal experience and subjective considerations. Therefore, strengthening digital literacy and developing a data-based work culture becomes an important prerequisite for the successful implementation of EMIS in Islamic educational institutions.

4.3. Supporting Factors and Obstacles to the Use of EMIS in Decision-Making

The use of the Educational Management Information System (EMIS) in supporting decision-making in Islamic educational institutions does not always run optimally. Although various studies show that EMIS is able to improve information quality, accelerate data access, and support evidence-based decision making, the level of success is greatly influenced by various internal and external factors of the institution. The existence of a sophisticated information system does not automatically produce quality decisions if it is not supported by adequate infrastructure, competent human resources, and good data governance. Conversely, various technical and non-technical obstacles can reduce the effectiveness of EMIS so that available information is not used optimally in the decision-making process (Najamudin, 2016; Amiruddin et al., 2023; Farid et al., 2024).

The literature review shows that the factors influencing the success of EMIS implementation can be grouped into several main aspects, namely technology infrastructure, data quality, human resource competence, leadership support, organizational culture, and the level of information system integration. These factors act as supporters when adequately available but can turn into obstacles if their management is not optimal. For example, good

data integration allows leaders to obtain fast and accurate information to support planning and program evaluation. Conversely, incomplete or infrequently updated data can produce information that is less valid and has the potential to cause errors in decision-making. Therefore, identifying supporting factors and obstacles is important to understand the extent to which EMIS is able to function as a strategic instrument in improving the quality of governance of Islamic educational institutions (Fauziyah et al., 2024; Maulida, 2024; Bakris & Nasution, 2024).

Table 1. Synthesis of Literature Findings on Factors Affecting the Effectiveness of EMIS Use in Decision-Making

Aspect	Supporting Factors	Obstacle Factors	Reference
Technology Infrastructure	Availability of computers, servers, internet, and integrated applications supports fast and accurate access to information	Limited internet networks, hardware, and system disruptions hinder data processing	Bakris & Nasution (2025); Dewi et al. (2024)
Data Quality	Complete, valid, and regularly updated data improves decision accuracy	Incomplete, inconsistent, or late updated data results in less accurate decisions	Amiruddin et al. (2023)
Human Resources	Digital competence of educators and education staff supports EMIS optimization	Low digital literacy and technology skills hinder system utilization	Sudjiman & Sudjiman (2018)
Leadership Support	Leadership commitment encourages a data-driven decision-making culture	Lack of managerial support causes the system to be used only administratively	Farid et al. (2025)
Organizational Culture	A work culture that values data improves decision-making effectiveness	Resistance to change and reliance on intuition hinder data use	Shobri (2024); Arifudin et al. (2024)
System Integration	Integration of academic, financial, and HR data facilitates policy analysis	Non-integrated systems cause data duplication and inconsistency	Ahmad & Sumanto (2024); Bakris & Nasution (2025)

The use of the Educational Management Information System (EMIS) in supporting decision-making in Islamic educational institutions is influenced by various interrelated factors. Based on the perspective of System Theory proposed by Von Bertalanffy (1968), an organization is viewed as a system consisting of various components that interact with each other to achieve certain goals. In the context of EMIS, these components include technology, data, human resources, organizational structure, and leadership. The success of an information system is not determined by a single component alone but by the ability of all components to work in an integrated manner. Therefore, the success or failure of EMIS use in decision-making cannot be explained only from a technological aspect but must be understood as the result of the interaction of various organizational factors.

Findings from various studies show that data quality is the most fundamental factor supporting the effectiveness of EMIS. According to the information system success model developed by William H. DeLone and Ephraim R. McLean, information quality is one of the main indicators of the success of an information system (DeLone & McLean, 2003). Accurate, relevant, complete, and timely information will produce higher quality decisions compared to

information that is invalid or outdated. In Islamic educational institutions, academic, financial, human resource, and infrastructure data form the basis for formulating various strategic policies. Therefore, the quality of decisions produced greatly depends on the quality of the data available in the system. When the data used is incomplete or not regularly updated, the risk of errors in the planning or evaluation of educational programs will be greater.

Besides data quality, human resources are the most dominant supporting factor in various studies on information system implementation. Although educational institutions already have adequate technological equipment, the benefits of the system will not be optimal if users do not have sufficient competence to operate and utilize the available information. In the perspective of DeLone and McLean, this condition relates to the dimensions of system use and user satisfaction, where the success of the system is greatly influenced by the level of acceptance and ability of users to utilize technology. Low digital literacy among educators and education staff often causes information systems to be used only for administrative needs, while their analytical function as a support for decision-making has not been utilized to the maximum. Thus, increasing human resource capacity through training and digital competence development becomes a need that cannot be ignored.

Another factor that has a significant influence is leadership support. In educational management theory, leadership acts as the main driver of organizational change. Leadership commitment in encouraging the use of data as a basis for decision-making will determine the extent to which EMIS is used strategically. Leaders who support digital transformation tend to encourage a work culture that is more objective, transparent, and evidence-based (evidence-based decision making). Conversely, if leaders still rely on intuition or personal experience in determining policy, the existence of EMIS will only function as an administrative tool without providing a significant impact on improving the quality of organizational decisions.

From a technological standpoint, adequate infrastructure is an important supporting factor in EMIS implementation. The availability of stable internet networks, adequate hardware, and integrated applications enables the process of collecting, processing, and distributing information to be carried out more quickly and accurately. Nevertheless, various studies show that technical problems remain a fairly common obstacle, especially in educational institutions with limited resources. Network disruptions, equipment damage, and non-integrated systems can hinder the flow of information so that the decision-making process becomes less effective. In the perspective of system theory, disruption to one component will affect the performance of the entire system because every element depends on one another.

Organizational culture is also a factor that determines the success of EMIS utilization. The transformation toward data-driven decision making requires a shift in mindset from a traditional approach toward a more analytical approach. Many educational institutions still have a work culture that prioritizes experience, seniority, or intuition in determining policy. This condition often gives rise to resistance to the use of information technology. Yet, the systematic use of data can improve the objectivity and accuracy of decisions. Therefore, building an organizational culture that supports data use becomes one of the important prerequisites in optimizing EMIS.

Furthermore, information system integration is becoming an increasingly important factor in the management of modern educational institutions. Integration of academic, financial, personnel, and infrastructure data enables leaders to obtain a comprehensive picture of the organization. Integrated information helps the analysis process and speeds up policy formulation because data from various units can be accessed in one system. Conversely,

systems that run separately often cause data duplication, information inconsistency, and reporting delays which ultimately reduce the quality of the resulting decisions.

The successful use of EMIS in supporting decision-making in Islamic educational institutions is the result of the interaction between technological, human, data, leadership, organizational culture, and system integration factors. This finding is in line with System Theory, which emphasizes the importance of interconnection between organizational components, and the DeLone and McLean Information System Success Model, which places system quality, information quality, and use quality as the main determinants of information system success. Thus, efforts to strengthen EMIS are not sufficient through technology procurement alone but must also be accompanied by improving data quality, developing human resource competence, strengthening leadership, and building an organizational culture that supports data-driven decision making.

4.4. Application of Data-Driven Decision Making in Islamic Educational Institutions

The development of information technology has driven a paradigm shift in the management of educational institutions from a conventional approach toward a data-driven decision-making approach. This concept places data as the main basis for decision-making, no longer intuition or the subjective experience of institution managers. In the context of Islamic educational institutions, this approach is becoming increasingly important because the demands of accountability, transparency, and improving education quality that are increasingly high require more objective and measurable decisions (Amiruddin et al., 2023). Thus, the Educational Management Information System (EMIS) is present as an important instrument that enables the decision-making process to be carried out more rationally and based on evidence.

Theoretically, data-driven decision making can be explained through the rational decision-making theory proposed by Herbert A. Simon. According to Simon, the decision-making process should ideally be carried out through the stages of problem identification, information gathering, alternative analysis, and selection of the best solution. In this context, EMIS functions as a system that provides the data needed at each of these stages. Farid et al. (2025) affirm that EMIS enables Islamic educational institution leaders to obtain faster and more systematic information, so that decisions no longer depend solely on intuition but on data that can be verified.

The use of EMIS has also proven able to reduce the dominance of intuition-based decisions that still occur in many educational institutions. Najamudin (2016) explains that before the existence of an integrated information system, many managerial decisions were made based on the personal experience of leaders or organizational habits without adequate data support. This condition has the potential to cause bias in decision-making. However, with EMIS, data such as the number of students, attendance levels, teacher performance, and financial conditions can be accessed in real time, so that the decisions taken become more objective and fact based.

In its implementation, EMIS provides real contributions to various aspects of Islamic education management. In the academic aspect, student learning outcome data is used to identify learning achievements and design quality improvement strategies. In the personnel aspect, information regarding teacher performance and competence becomes the basis for decision-making related to professional development. Meanwhile, in the financial aspect, institutional income and expenditure data helps leaders prepare more efficient and transparent budget planning. Bakris and Nasution (2025) emphasize that data integration in

EMIS enables decision-making to be carried out more comprehensively because information from various units can be accessed in one centralized system.

Table 2. Use of EMIS in Decision-Making in Islamic Educational Institutions

Decision Aspect	Data Source from EMIS	Form of Decision	Impact	Literature Source
Academic	Student grades, learning evaluation results, attendance, competency achievement	Evaluation of learning outcomes, determination of remedial action, strengthening of learning strategies	Improved learning quality and academic process effectiveness	Amiruddin et al. (2023); Najamudin (2016)
Personnel	Teacher performance data, attendance, certification, training, workload	Performance appraisal, job promotion, training need analysis	Increased teacher professionalism and more objective HR management	Farid et al. (2025); Bakris & Nasution (2025)
Finance	Income data, expenditure, budget plan (RAB), financial reports, BOS (school operational assistance)	Budget preparation, cost control, priority fund allocation	Transparency, accountability, and budget use efficiency	Maulida (2025); Bakris & Nasution (2025)
Facilities and Infrastructure	Goods inventory, facility condition, space needs, maintenance	Facility procurement, repair, facility investment priority	Effectiveness of educational facility management	Amiruddin et al. (2023); Farid et al. (2025)
Student Affairs	Student data, violations, attendance, achievements, guidance records	Student guidance, discipline policy, counseling program	Increased discipline and student character formation	Sudjiman & Sudjiman (2020); Najamudin (2016)
Quality Management (Additional)	Program evaluation data, performance monitoring, quality indicators	Program evaluation, policy improvement, strategic planning	Sustainable improvement of institutional quality	Maulida (2025); Farid et al. (2025)

In addition, the application of data-driven decision making also contributes to improving the transparency and accountability of Islamic educational institutions. As shown in Table 2, the use of the Educational Management Information System (EMIS) in various aspects such as academic, personnel, finance, facilities and infrastructure, and student affairs shows that every decision produced has a data basis documented in the system. Maulida (2025) explains that decisions based on data have a higher level of traceability.

Nevertheless, the implementation of data-driven decision making still faces a number of obstacles. Sudjiman and Sudjiman (2020) show that one of the main challenges is the low digital literacy of users, which causes data in the system to not be utilized optimally in the

decision-making process. In addition, there is still a tendency in some institutions to maintain patterns of decision-making based on experience and intuition, even though data is available in the system. This condition shows a gap between the availability of technology and its utilization in managerial practice.

Data quality is also an important factor that determines the effectiveness of EMIS. Data that is incomplete or not regularly updated can reduce the accuracy of the information produced, thus affecting the quality of the decisions taken. Therefore, strengthening data governance and improving user competence become important aspects in supporting the application of data-driven decision making in Islamic educational institutions.

Overall, EMIS acts as a strategic instrument in reducing dependence on intuition and improving the quality of data-driven decision making. With the support of a good information system, Islamic educational institutions can produce decisions that are faster, more objective, and evidence based, so as to improve management effectiveness and sustainably improve education quality.

5. Conclusion

Based on the results of the literature review, the Educational Management Information System (EMIS) has a significant role in supporting decision-making in Islamic educational institutions. EMIS provides accurate, integrated, and timely information so that it helps institutional leaders carry out planning, implementation, monitoring, and program evaluation more objectively and based on data. The existence of EMIS also enables the decision-making process to be carried out more quickly, effectively, and accountably.

In addition, EMIS contributes to improving the quality of Islamic educational institutions through the optimization of academic, personnel, financial, facilities and infrastructure, and student service data management. The use of structured information helps institutions improve administrative efficiency, transparency, accountability, and the effectiveness of educational program implementation. Thus, EMIS functions not only as an administrative tool but also as a strategic instrument in supporting governance and sustainably improving the quality of Islamic educational institutions.

Theoretically, this study extends the application of System Theory and the DeLone and McLean Information System Success Model by demonstrating that the two frameworks are complementary in the context of Islamic educational institutions, where System Theory explains the interaction between organizational components such as technology, human resources, leadership, and data, while the DeLone and McLean model clarifies how system quality, information quality, and service quality jointly determine the effectiveness of EMIS in supporting decision-making and quality improvement.

The effectiveness of EMIS utilization in supporting decision-making and quality improvement is influenced by data quality, human resource competence, availability of technological infrastructure, leadership support, organizational culture, and information system integration. Therefore, optimizing these factors becomes important so that the benefits of EMIS can be maximally realized in the management of Islamic educational institutions.

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