

Analysis of the Role of Management Information Systems (MIS) as a Pillar of Strategic Decision Making in the Digital Era to Optimize Reporting Accountability in Educational Institutions

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The development of digital technology requires educational institutions to manage data and information more effectively to support strategic decision-making and improve reporting accountability. Management Information Systems (MIS) are a crucial instrument because they can integrate data in a structured, accurate, and timely manner, thus supporting data-driven decision-making. This article aims to analyze the role of MIS in strategic decision-making in the digital era, identify its contribution to optimizing reporting accountability in educational institutions, and explain the factors influencing the success of MIS implementation in digital reporting management. The research method used is a qualitative approach through a literature review, reviewing various books, journal articles, and relevant scientific sources. The results of the study indicate that MIS plays a significant role in providing objective information, supporting data-driven decision-making, and increasing transparency and accountability in academic and financial reporting. The success of MIS implementation is greatly influenced by the competence of human resources, the readiness of technological infrastructure, and the support of leadership and organizational policies. Thus, MIS can be viewed as a strategic pillar in strengthening the governance of educational institutions that is professional, transparent, and adaptive to the demands of the digital era.

Keywords: Role of Management Information Systems, Pillars of Strategic Decision-Making, Optimizing Accountability

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1. Introduction

The development of digital technology has brought significant changes to information management in educational institutions, particularly in terms of decision-making and reporting accountability. In the digital era, data has become a strategic asset that must be managed effectively to produce information that supports the policy formulation process. According to Laudon and Laudon (2020), information plays a crucial role as a basis for decision-making because it can provide an objective picture of the organization's condition. Therefore, educational institutions require a Management Information System (MIS) to integrate all data in a structured and centralized manner. A Management Information System is an integrated system designed to provide accurate, relevant, and timely information to support managerial decision-making processes at various levels of the organization. Through an MIS, managers can monitor organizational activities, identify problems more quickly, and make more rational, data-driven decisions. (Yaser Hasan Al-Mamary, Alina Shamsuddin, 2013)

To date, many educational institutions have faced challenges in providing accurate, timely, and accountable reporting data. This is due to the use of manual methods for data recording and reporting, as well as the low utilization of information technology in institutional management. Priyanto (2020) stated that these weaknesses often lead to inconsistencies in reporting data and hinder the process of public information

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transparency. The implementation of an MIS is expected to improve work efficiency, minimize recording errors, and support internal and external audits.

Reporting accountability is a crucial indicator in assessing the governance of educational institutions. Educational institutions are required to present academic and financial performance reports transparently as a form of accountability to the public. According to Eriyanto (2020), good reporting accountability must meet the elements of information clarity, data accuracy, and traceability of information sources. With the implementation of an integrated MIS, institutional leaders can monitor and evaluate all management processes more effectively through real-time data.

Furthermore, an MIS plays a strategic role in supporting data-driven decision-making. Turban et al. (2020) explain that an MIS enables more accurate policy development because it is based on factual data and historical analysis. Therefore, an MIS is an important tool for educational institution leaders in formulating strategies to improve learning quality, budget management, and human resource management.

In today's digital era, the use of MIS is no longer considered an option, but rather a necessity to increase the competitiveness of educational institutions. Implementing digital systems in the reporting process allows institutions to manage academic and financial data more efficiently, while simultaneously improving the quality of strategic decision-making. According to Kurniawan (2021), digitalizing MIS fosters an organizational culture that is adaptive to technological innovation and improves the institution's ability to meet government regulatory requirements regarding reporting.

Through the implementation of MIS, educational institutions can build integrated, transparent, and accountable information systems to support professional governance. This aligns with modern management objectives, which emphasize the importance of utilizing information technology as a key driver of innovation. Therefore, this research is crucial to analyze the role of MIS as a pillar of strategic decision-making in the digital era and its contribution to optimizing reporting accountability in educational institutions (Suharsaputra, 2021).

The objectives of this article are as follows: (1) To analyze the role of MIS in strategic decision-making in the digital era. (2) To identify the contribution of MIS to optimizing reporting accountability in educational institutions. (3) To explain the success factors for MIS implementation in digital reporting management.

2. Research Method

The method used in writing this paper is a qualitative research method with a literature study approach. The research was conducted by reviewing and analyzing various relevant literature sources, such as textbooks, scientific journal articles, previous research results, and policy documents related to Management Information Systems, strategic decision-making, and reporting accountability in educational institutions. The literature study approach was chosen because it allows researchers to gain an in-depth understanding of the concepts and phenomena studied through the thinking of experts. According to Creswell (2018), literature-based qualitative research aims to interpret and synthesize various theoretical perspectives to build a comprehensive conceptual understanding.

The data obtained were analyzed descriptively and analytically by comparing, interpreting, and linking expert opinions regarding the role of MIS in educational management. Sugiyono (2020) states that qualitative descriptive analysis is used to describe the research object systematically and factually based on available data. Furthermore, Zed (2014) explains that literature studies require researchers to organize information, critique sources, and draw logical and scientific conclusions.

The research stages include collecting relevant references, grouping data based on research themes, and drawing conclusions through a synthesis of theory and empirical findings. According to Nazir (2017), the literature study method is effective for tracing the development of concepts and theories related to research problems. Therefore, this method is expected to provide a strong theoretical foundation for analyzing the role of Management Information Systems in supporting strategic decision-making and improving reporting accountability in educational institutions.

3. Result and Discussion

The Role of Management Information Systems in Strategic Decision-Making

Management Information Systems (MIS) serve as providers of accurate, relevant, and timely information, serving as the primary foundation for strategic decision-making in educational institutions. Through structured and integrated data management, MIS enables leaders to obtain an objective picture of the organization's condition, including academic performance, finances, and human resources. Laudon and Laudon (2020) explain that the information generated by MIS reduces reliance on intuition and assumptions because decisions are based on verifiable facts. Similarly, Kurniawan (2021) asserts that data-driven decisions tend to be more targeted, consistent, and have a lower risk of error than decisions made without adequate information system support.

In addition to providing basic information, MIS also supports the implementation of the concept of data-driven decision-making. In this context, MIS not only presents raw data but also processes historical data into meaningful information through analysis and reporting. Turban et al. (2020) state that the MIS's ability to integrate and analyze data enables institutional leaders to identify trends, patterns, and potential problems early on. Utilizing this data helps educational institutions rationally prioritize programs, for example, in improving learning quality, allocating more efficiently, and planning human resource development. Priyanto (2020) added that a data-driven approach promotes transparency and accountability because every policy can be traced based on clear supporting data.

Furthermore, Management Information Systems (MIS) function not only as an administrative tool but have evolved into a crucial instrument for performance evaluation and strategic planning in educational institutions. MIS enables leaders to continuously monitor performance through measurable indicators, allowing for systematic and objective evaluation. O'Brien and Marakas (2018) explain that the information generated by MIS serves as the basis for developing long-term strategic plans, as it can demonstrate organizational achievements as well as gaps that need to be addressed. Zhang and Li (2021) emphasize that through credible and integrated information, MIS acts as a driver of organizational change, encouraging educational institutions to adapt to environmental dynamics and the demands of the digital era in a more responsive and sustainable manner.

Examples of MIS Implementation in Educational Organizations

Management Information Systems (MIS) in the form of student administration systems have been widely implemented in schools in Indonesia, one example being the Basic Education Data (Dapodik). This system serves as a national database that integrates information related to students, educators, education personnel, and school facilities and infrastructure. According to Priyanto (2020), Dapodik helps schools manage data centrally and standardized, resulting in faster, more accurate, and consistent reporting to the government. In addition to supporting administrative needs, Dapodik also plays a strategic role in formulating education policies, as the data it generates serves as the basis for determining budget allocations, educational assistance, and evaluating the quality of education services at the national and regional levels.

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In addition to student administration systems, the implementation of MIS is also evident in financial management applications in educational institutions. Financial information systems are used to systematically and transparently record, manage, and report budget usage. Hall (2019) states that digital-based financial systems can improve accountability in the management of education funds, including School Operational Assistance (BOS) funds, because all transactions are well-documented and traceable. Real-time access to financial data enables institutional leaders to more effectively monitor and control budgets, while also streamlining internal and external audit processes. Thus, the use of a financial MIS not only improves administrative efficiency but also strengthens public trust in the management of education funds.

At the university level, the implementation of the Academic Information System (SIKAD) is one of the most important forms of MIS utilization in managing academic activities. SIKAD is used to manage various academic processes, such as completing Study Plan Cards (KRS), managing grades, class schedules, and reporting student outcomes. According to Zhang and Li (2021), SIKAD facilitates interaction between students, lecturers, and administration through an integrated system, thereby making academic processes more effective and efficient. Turban et al. (2020) emphasized that a digital academic system enables more objective and data-driven evaluation of academic performance, as all learning activities are systematically documented. With the support of SIKAD, universities can improve the quality of academic services while supporting strategic decision-making based on accurate information.

Factors for Successful MIS Implementation

The success of a Management Information System implementation is greatly influenced by the MIS operator's ability to manage data accurately and consistently. Operators serve as the primary liaison between the system and users, so their level of technological literacy will determine the quality of the information produced. McLeod and Schell (2019) explain that errors in data input, processing, and updating often stem from users' lack of understanding of the system, which ultimately impacts the accuracy and reliability of information. Therefore, Kurniawan (2021) emphasizes the importance of continuous training for MIS operators to enable them to keep up with technological developments, comprehensively understand system procedures, and maintain data consistency. With competent human resources, MIS can be optimally utilized as a tool to support decision-making and accountable reporting.

In addition to human resources, the availability of adequate technological infrastructure is also a key determinant of MIS success. Technological infrastructure includes hardware, software, networks, and integrated data security systems. Stair and Reynolds (2019) state that MIS will not function optimally without the support of stable and reliable infrastructure, as technical disruptions can hinder information processing and distribution. Good infrastructure enables fast, real-time data access, thus supporting work effectiveness and accurate decision-making. Romney and Steinbart (2021) emphasize that data security aspects, such as the use of centralized servers, backup systems, and protection against unauthorized access, are essential components of an MIS infrastructure to maintain the integrity and confidentiality of an institution's information.

Another equally important factor is leadership support and the institution's internal policies. Leadership commitment significantly determines the direction and sustainability of MIS implementation, both in terms of providing resources, establishing regulations, and establishing a data-driven work culture. According to O'Brien and Marakas (2018), institutional leaders need to encourage the use of information as the primary basis for decision-making, so that MIS is used not only as an administrative tool but also as a strategic instrument. Eriyanto (2020) emphasizes that clear and consistent internal policies will strengthen accountability for reporting through the system, as every process and decision is based on accountable

data. With strong leadership support and appropriate policies, MIS implementation can be sustainable and provide maximum benefits for educational institution management.

4. Conclusion

Based on the discussion of Management Information Systems (MIS) and their role in strategic decision-making in the digital era, it can be concluded that MIS is a source of accurate, relevant, and timely information for educational institution leaders. The information generated through the system enables objective decision-making because it is supported by reliable data. In addition to providing information, MIS also encourages the implementation of data-driven decision-making. Through historical data analysis, educational institutions can develop long-term strategic plans, evaluate ongoing programs, and establish policies in accordance with the organization's priority needs. Thus, MIS plays a crucial role in improving the quality of educational management. The implementation of MIS has been proven to impact the accountability of educational institution reporting. The integrated digital system facilitates the preparation of academic and financial reports, resulting in more transparent, accurate, and easily audited reports. This serves as the basis for increasing public trust in educational institution governance. The success of MIS implementation is influenced by several factors, such as human resource competence, technological infrastructure readiness, and top management support. Effective implementation requires the support of internal policies and an organizational culture that utilizes data as the basis for strategic policy development. Therefore, SIM can be considered as a main pillar in strengthening the governance of educational institutions in the digital era.

5. References

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