



Analysis of the Relationship of Management Information Systems (MIS) with Educational Management Functions

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Abstract. This study discusses the importance of implementing a Management Information System (MIS) in educational institutions to improve the quality of educational services. This system integrates information and communication technology, enabling all stakeholders to perform their roles efficiently. By adopting MIS, educational institutions can manage data and information more effectively, including the collection, recording, processing, and distribution of information, thus supporting rapid and accurate decision-making processes. MIS facilitates management in executing functions such as planning, organizing, directing, and controlling. By creating an MIS and hiring qualified staff, educational institutions can make sure that everything runs smoothly, especially when it comes to learning, while also increasing efficiency, effectiveness, and productivity. Therefore, MIS contributes to creating high-quality educational services that meet the needs of all stakeholders and the broader community.

Keyword: Educational Management, Management Functions, Management Information System

1 Introduction

Information and communication technology refers to a system utilizing tools and resources that facilitate stakeholders in performing their roles efficiently and effectively. This system is commonly known as a management information system. One potential solution is to provide the necessary tools and infrastructure, enabling the implementation of quality education through an education management information system. This is, of course, very difficult to do if it is done manually and does not use integrated information technology between internal sections of the educational institution as a basis for management. One of the essential aspects of modern education management is ensuring access to data and information throughout the processes of collection, recording, processing, duplication, storage, and distribution [1].

The implementation of a competency-based management information system is essential and can offer a competitive edge, making it a top priority. Effective management or governance within an educational institution is crucial for its sustainability. One key factor that can preserve and even enhance an educational institution is the efficient management of its information systems [2]. According to the regulation of the Minister of Education and Culture No. 34 of 2018, every vocational high

school (SMK/Mak) must adhere to management standards, which include the implementation of a management information system. The design of a management information system (MIS) is to process and organize data or information to facilitate the execution of organizational tasks [3].

Generally, we refer to a management information system as a system that processes data for an organization's use. Nowadays, the term "management information system" often brings to mind a computer-based system. The fundamental concept of traditional management information systems involves systematic tasks such as recording schedules, archiving documents, facilitating communication among organizational managers, and presenting information for decision-making purposes. To ensure the seamless flow of information, educational institutions must develop management information systems that integrate both internal and external components. This ensures an effective and high-quality information flow, supported by reliable information technology and skilled human resources capable of operating it. A well-implemented management information system can enhance the operations of educational institutions, particularly by facilitating the learning process between educators and students and thereby achieving the desired educational objectives.

A management information system is one that not only processes transactions beneficial to organizational interests but also offers extensive information and support for management functions in decision-making [4]. Based on expert definitions, a management information system can be defined as a system developed to provide information that supports decision-making processes in an organization's management activities. The primary goal of implementing a management information system is to equip the organization with a dependable system for processing data into valuable information, aiding both routine and strategic decision-making. Therefore, a management information system serves as a tool that delivers relevant data and information to organizational managers to facilitate the execution of organizational tasks effectively [5].

2 Research Methodology

This research employs a literature study approach. Examining theories and other references related to the values, culture, and norms present within the social context under analysis constitutes a literature study. This method allows for in-depth analysis by referencing various previous studies. Data collection techniques include gathering and analyzing documents such as books and journals that pertain to teacher professionalism.

3 Results and Discussion

3.1 Management Information System

A system is a structured group of elements, components, or variables that interact, depend on, and work together. When used in this way, "components" or "subsystems" doesn't just mean physical things. It also means abstract or mental things like mission, vision, policies, procedures, and other casual activities.

There are several functions and objectives of management information systems. The following is the explanation:

- a. To simplify the implementation of the four management functions, namely planning, organizing, directing, and controlling.
- b. Can increase data efficiency and effectiveness.
- c. Can save costs and increase productivity in an organization's performance.
- d. The presence of a management information system significantly enhances the quality and efficiency of human resources.

3.2 Education Management Information System

There are various interpretations of the Education Management Information System (SIMDIK), including: SIMDIK is an ICT-based data system for schools, allowing all school databases to be securely stored and accessed via a server. Additionally, educational institutions, particularly schools, design a Management Information System (MIS) to meet their management needs.

An education management information system integrates human resources with information technology applications to collect, store, process, and retrieve data, facilitating the decision-making process in education. This data consists of empirical or factual information that is real and can be verified for its accuracy.

A management information system refers to a system that ensures the availability of a comprehensive set of data, stored to provide information that supports an organization's operations, management, and decision-making processes.

3.3 Objectives of Educational Management Systems

The objective of developing information through an Educational Information System application is:

- a. Assist all stakeholders involved in the field of education by offering complete and detailed information about educational matters.
- b. Offering support and facilities to all stakeholders involved in the field of education.
- c. Ensuring public accountability by delivering transparent information on policies and the utilization of resources allocated for education.
- d. Enhancing the knowledge of teachers and students about informatics and its advantages through various training programs.

- e. Providing educators and students with easy and comprehensive access to information related to science and other educational resources.

3.4 Education Management

The essence of educational management lies in educational management, namely the management of educational institutions, which are systems. Over-all, what needs to be managed are: 1. The performance of people who work in educational institutions; 2. The running of educational activities; 3. The activities of teachers and what they are supposed to do; 4. The curriculum as an idea and goal for education; 5. Learning systems and ways to teach and learn; 6. Overseeing and keeping an eye on education; 7. Evaluating education; and 8. Paying for the buildings, tools, equipment, and infrastructure that are needed for education.

Educational management refers to the process of planning, organizing, directing, monitoring, and evaluating educational activities to achieve established goals. Its goal is to guarantee the systematic implementation of planned initiatives and enable accurate, thorough, and proper evaluation. This approach aims to achieve educational objectives in a productive, high-quality, effective, and efficient manner.

The success of an educational institution is closely tied to the management practices implemented, which encompass the universal principles of art and science in performing functions such as planning, controlling, supervising, managing personnel, and fostering professionalism. The function of Education Management consists of four key elements, which are as follows:

- a. Planning

Planning is a strategic step to achieve the goals of an organization.

- b. Organizing

Organizing is the process of bringing together human resources, capital, and equipment in an efficient manner to accomplish objectives.

- c. Implementation

Implementation is the process of utilizing available human resources to perform activities aimed at achieving objectives, ensuring efficient processes and producing effective outcomes.

- d. Controlling

Supervision is the process of offering feedback and taking follow-up actions by comparing the achieved outcomes with the established plan, then making adjustments as necessary when discrepancies arise.

3.5 The relationship between MIS and education management functions

An organization's management activities use a Management Information System (MIS) to handle information. The aim is to assist management in making appropriate and effective decisions. Management information systems offer services that serve as a foundation for planning, monitoring, and guiding management activities. Other divisions or departments subsequently utilize the data generated to perform their respective tasks.

Management information systems and management functions have a very close relationship. Correct execution of the four elements of the management function is crucial. These elements include planning, organizing, directing, and controlling.

Planning. MIS planning can help management in setting organizational goals and making the right decisions. The planning function, which requires determining goals, strategies, policies and programs to achieve goals, really requires accurate information about the condition of the organization. SIM can help managers collect whatever information is needed to analyze the problems they face, create effective solutions and organize strategies to respond to problems that arise in the organization. In MIS education, it can help set goals, provide certain facilities and environments, and identify the prerequisites for achieving the goals that have been set as well as determine effective and efficient ways to shape people to have maximum individual and social competence. A management information system (MIS) can facilitate systematic thinking and rational analysis, making the quality of education more effective and efficient. This improvement ensures that the educational process aligns with the demands and needs of society.

Organizing. In the organizing function, SIM also plays a very important role. Managers use SIM to design/refine the necessary organizational structure, identify all roles and responsibilities of each member of the organization, and organize the duties and obligations of each individual in the organization. In the function of organizing education, SIM can assist in activities to organize human resources and other physical resources owned by educational organizations to carry out predetermined plans and achieve educational goals. The SIM function in organizing education can help determine strategic steps to realize an organizational plan.

Directing. In SIM Direction, it can help management in monitoring, directing employees, and improving employee performance. To effectively implement the set plans and achieve the expected results, direction is crucial. SIM plays an important role in supporting and motivating all personnel in every SIM-related educational activity in directing by providing information and tools needed for decision-making, performance monitoring, and corrective action in educational organizations. SIM also helps provide direction to maximize tasks in participating in realizing school management that is in accordance with the ideals of the school organization as a whole [6].

Controlling. In the supervisory function, SIM plays a crucial role in monitoring performance and providing feedback on employee work results. MIS helps managers to analyze the general activities and performance of individual functions in the organization. This allows for quick decision-making when realizing there are problems occurring in a company that can disrupt the organization's performance and efficiency [7]. SIM functions in supervision to assist teachers in understanding the educational goals, recognizing the conditions and needs of students, fostering strong group morals, enhancing the quality of learning and teaching, providing a technology-based

teaching system, and serving as a foundation for decision-making. The principal makes the decision to reassign teachers. The purpose of supervision is to enhance the quality of education and ensure the attainment of educational objectives.

4 Conclusion

Educational institutions must be able to develop management information systems (MIS) to enhance the quality of their educational services. At present, these institutions face various needs in managing and operating their organizations. One of these needs is providing access to data and information gathered through processes such as collection, recording, processing, duplication, storage, and transmission until it reaches decision-makers. If these activities are performed manually, they are likely to be inefficient, especially given the current shift in human behavior that demands faster and easier processes. Also, data needs to be managed and completed on time, so supporting measures are needed to make sure that the best results are delivered on time. This is an effective way to help all of an organization's activities run smoothly, efficiently, and effectively.

The Education Management Information System is an integration of human resources and information technology applications that is used to select, store, process, and retrieve data to assist in the educational decision-making process. If an educational institution meets all the needs of its customers (students, teachers, parents, and the community), it is considered successful. In terms of information services, educational institutions must be able to provide information that meets customer needs and is easy to obtain effectively and efficiently, which will have an impact on increasing the quality of education.

Acknowledgment. The author expresses sincere gratitude to Universitas Negeri Medan for providing the resources and academic environment necessary for conducting this research. The author extends special appreciation to colleagues and mentors for their valuable insights and constructive feedback, which have significantly enhanced the quality of this study. The author also acknowledges the references and scholarly works that contributed to the development of this paper.

Disclosure of Interests. The authors have no competing interests to declare that are relevant to the content of this article.

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(Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan) 4,(2), 225 (2019)

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