Implementation of Management Information Systems in Educational Institutions Public Vocational School 8 Samarinda

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Abstract: *Management Information System is a system designed to provide information to support decision-making on management activities (planning, implementing, organising and controlling) within an organisation. Understanding management information systems based on information technology, including understanding the concept of information systems, information use, and the value of information. System boundaries have been determined by encouraging the quality of the system's work. The work process in each system produces a continuous result (output) and an evaluation system through feedback treatment. The sense is that if the output contains information contrary to the organisation's achievements, it will become input in the system. If the system has received the results of the feedback, the system will make the necessary revisions and adjustments so that the output is consistent with its original purpose. Then with the rapid advancement of technology, The ability of an educator must be able to tame technology so that they can become slaves or tools, not enslaved by technology. This research aims to identify Islamic education management information systems and their concepts and implementation processes in Islamic educational institutions. The research results are: Implementation of existing information systems in schools, and the community feels the output of the implementation of the information system. Data collection techniques used in this study were observation and interviews with related educational institutions.*

Keywords: *System Information and Educational Management.*

Introduction

This research was conducted because information systems in the educational environment, especially Islamic-based education, are an absolute necessity and provide a competitive advantage so that they receive a high enough priority. Good management in an educational institution is crucial for the sustainability of the institution. Good and on-target information system management is one of the important things that maintain and even develop an educational institution (Ikhwan & Yuniana, 2022); (Ikhwan, 2018).

Management of information in educational institutions or institutions is part of the education system itself. Information that is well managed should be in an information management system. Information that is well managed in a system is known as a management information system. Meanwhile, the management information system implemented in educational institutions is called the educational management information system (Herliana et al., 2021).

The rapid sophistication and development of technology positively impact every element of society, especially individuals and organisations. Some positive impacts, in general, include the convenience, comfort and data security of information users at work. One sector that takes advantage of the development of information technology is the education sector. Some methods can turn data into more valuable and helpful information for users of information technology (output). The results of this output can make education even better in an educational unit using this technology system (Nuraisah et al., 2021).

In general, when talking about management information management systems, what comes to mind is a system that is created to perform data processing that an organisation will use. Today, when someone hears the term management information system, a computer system comes to mind. The core understanding of conventional management information systems is contained in structured work such as recording agendas, proposing communication between organisational managers, presenting information for decision making etc.

Planning, organising, leading and supervising, especially in education, are managerial activities that are decision-making processes, and all require precise and accurate information (Murtopo, 2020). The information needed by managers, including education

implementers, is provided by a management information system, which is a system that provides all information to managers regularly. Information is used to monitor and evaluate the agenda and the results to be achieved.

Processes, procedures, organisational structures, human resources, management, and organisational culture are needed to form an information system. These components help the success of the teaching and learning process in education (Wahyuni, 2019).

The management information system is an information system that, besides processing transactions that are very useful for the benefit of the organisation, also provides a lot of information and processing support for the management function in decision-making. According to Ais Zakiyudin in his book, a management information system is a management information system describing the availability of a series of data that is quite complete that is stored to provide information to support operations, management, and decision-making within an organisation.

The existence and role of information technology have brought a new era in education development but have yet to be matched by an increase in human resources. These conditions encourage changes and developments in various aspects to accelerate improvements to achieve the goal of quality education (Ikhwan, 2022). Quality is indeed necessary, but it continues beyond quality. Other components such as high performance, efficiency, effectiveness, and productivity supported by solid ICT constitute one unit that must be integrated into the management system (Sonia, 2020).

In the effort to develop a sophisticated computer-based management information system, it requires people who have high skills and experience and require the participation of organisational managers. Many organisations fail to build management information systems due to a lack of proper organisation, lack of adequate planning, lack of reliable personnel, lack of management participation in the form of managers in designing systems, controlling system development efforts and motivating all personnel involved (Rusdiana & Irfan, 2018).

Finding out whether the information is valid depends on the recipient's purpose, the accuracy of delivery and data processing, time, space and place, form and semantics. Information has several characteristics, which include:

1. True or false. These characteristics relate to something that is reality or not from information.

2. Information can mean entirely new to the recipient.

3. Additional. Information can update or add value to existing information.

4. Corrective. Information can be used as a correction material for previous information, wrong or hoax.

5. Affirmation. Information can reinforce existing information; this is still useful because it can increase the recipient's perception of the truth of the information.

From an Islamic perspective, there are sources of information that are always used or exploited by humans. The source of this information consists of revelations from Allah S.W.T. The form of Al-Qur'an and Al-Hadith, which comes from the prophet Muhammad S.A.W., explains the Qur'an. Both of these sources are the basis of information that is believed to be accurate and must be trusted. Al-Qur'an and Al-Hadith are the primary sources of information studies on Islam (Agustin, 2018).

So that the importance of management information systems for the development of Islamic education. One example is that the vision and mission of Islamic education have not been appropriately formulated and universally (Ridwan, 2018). This problem is exacerbated by the unavailability of professional Islamic educators, namely educators who, in addition to mastering the material taught properly and correctly, must also be able to teach effectively and efficiently to students and have idealism.

Method

This type of research is qualitative research, trying to capture and translate the phenomena and facts that exist in the field related to the information management systems that are currently running (Ikhwan, 2020). In this case, the data collected was based on the results of interviews at State Vocational High School 8 Samarinda from 14 November 2022 to January 2023. The interviews used were unstructured, namely interviews with selected informants according to their unique characteristics. On this occasion, the selected informants were the managers of the educational institution concerned, namely one of the Public Relations team, because they are considered to have

the knowledge and understand the situation and know more about the information needed.

Result and Discussion

Education Management Information System

Understanding the system, according to experts, is defined as follows: (1) According to Gordon B. Davis, the system is parts that operate together to achieve several goals; (2) According to Raymond Mc Leod, the system is a group of integrated elements to achieve a goal.

So, from some of the definitions of the system above, it can be concluded that a system is a set of interrelated elements that influence each other in carrying out joint activities to achieve a goal. For example, a computer system has software, hardware, and brainware (human resources).

Information functions as a liaison between various parts of the organisation so that the components are not isolated but remain a unit within the organisation. Because of this vital function, some experts liken the information to the organisation's blood. If the blood does not exist or does not work, the organisation will die. It is said that information is an agent for sustaining organisational life.

In conveying information, adequate communication skills are needed to communicate clearly, concretely and thoroughly. From an Islamic perspective, communication is an integral part of human life because all of our steps are always accompanied by communication. Islamic communication, namely communication with good morals or ethics. Communication with morals al-karimah originates from the Al-Quran and Hadith (Sunnah of the Prophet). As well as communication that creates goodness for oneself and others (Ikhwan, n.d.).

The choice of technology in education will open up possibilities for the birth of various alternative forms of new institutions that provide learning facilities. A series of criteria for using technology in education include: must maintain compatibility with existing facilities and technology, be able to stimulate technological and scientific developments and spur efforts to improve the quality of education itself. Thus, the application of technology in education is very likely to change teaching and learning interactions between learning resources (Hambali, 2021).

Management information systems are distinguished from ordinary information systems because management information systems are used to analyse other information systems that are applied to the organisation's operational activities. Academically, this term is generally used to refer to a group of information management methods related to the automation or support of human decision-making, for example, decision support systems, expert systems, and classified information systems. After 2000, the management information system began to develop into an integrated system in various holding companies and their branches. The system is then formed in a Computer Based Information System. Until now, the information system runs in an integrated manner and runs automatically (Hariyanto, 2018).

| Input | ➡ | Process | ➡ | Output |

Figure 1. *Management Information system work procedures*

The success of making an education management information system is determined by hardware and software and the quality of the human resources that compile and use the management information system. In addition, the involvement of managers and the right method in preparing management information systems is also a concern. So these interrelated elements can improve the quality of education (Rahmadi et al., 2022).

Implementation of Management Information Systems in Education

Management Information Systems in education, namely the existence of several people, guidelines, and tools for processing data, organising and selecting data that is ready to be presented as information to schools to support operational activities and instructional activities.

School management is an important factor in carrying out education and teaching in schools by measuring the success of students' achievements. Schools as organisation in the development and achievement of goals, must refer to the guidelines and directions for educational development (Rahmadi et al., 2022).

In the concept of an education management information system, all elements and sub-elements must often be related and form a quality information system. Apart from that, there are also components, such as brainware, which become the driving force in the operation of the education management information system. Basically, this

management information system is information to explain the overall concept by breaking down several management information sub-systems to make it easier to solve problems (Wahyuni, 2019).

There are several ways to understand management information systems, whether in government business, education or politics. First, we have to understand the concept of management information systems. In understanding, it must be as a whole, not half measures.

According to Stoner, quoted by Nurdyansyah, the definition of management is a way in which there are several aspects, such as the process of planning, organising, leadership and supervision between members to achieve a predetermined goal. In almost all fields, people use management principles and elevate education to be their most crucial main field. Education applies a response stimulus between educators and students which aims to change patterns of thinking, understanding and reasoning in the learning process. Thus, educators must have a suitable method of conveying material so that effective and efficient learning is realised. According to Robert G. Murdick, a management information system is a group of people with guidelines and instructions and the tools to process data, retrieve data, and produce information that can be used efficiently.

From some of the explanations above, it can be concluded that the information management system is the processing of educational data that produces information to make the learning process more effective and efficient by utilising information and communication technology. There are several stages in designing a Management Information System, including:

Table 1. Educational Institution Management Information System

Planning Stage	Before creating an education management information system, educators must plan what students need in advance to be accepted in the environment.
Analysis Stage	After planning, the next step is to analyse the education management information system to determine whether it is appropriate. If it is not suitable, this analysis phase serves to design a new system or update the previous system.
Design Stage	At this design stage, it makes it easier for educators to prepare tools to plan and analyse Education management information systems.
Implementation	In this stage, it combines physical and

Stage	conceptual resources to produce an education management information system according to their individual needs.
Stage of Use	This stage is helpful for meeting the needs in achieving goals at the planning stage as well as the concept of an education management information system.

The education management information system (MIS) has characteristics, namely:

1. Within the organisation has a special section for the manager of educational MIS.

2. MIS is an interweaving of data and information traffic from each part of the organisation centred in the education MIS section.

3. MIS is a whole process that includes: a). Data collection, b). Data processing, c). Data storage, d). Data collection, and d). Dissemination of information quickly and precisely.

4. MIS is intended so that executors can carry out their duties properly and correctly (Amirudin, 2022).

Management Information Systems in educational institutions will provide the following benefits; First, an educational data and information management system is available. The second is integrating educational data and information to support the decision-making process. Third, the availability of complete educational data and information for all stakeholders with interest in the education sector (Nuraisah et al., 2021).

The education management information system is also expected to be able to provide quality services. The quality of this service is based on the dimensions of reliability, trustworthiness, responsiveness, responsibility, assurance (guarantee or certainty), empathy (care or earnestness), and tangible (physical or actual product). Implementation of education management information systems will affect the image of educational organisations. Factors of leadership, human resources, strategic policies, process management, customer satisfaction, and social responsibility influence the image of educational organisations (Sa'adah et al., 2021).

The following is the result of a research analysis based on the interviews the author conducted with informants. In this chapter, the author presents the research results obtained, using the results of observations and interviews, presented in a descriptive qualitative way by explaining in detail the data so that a conclusion can be drawn

from each problem. Based on the results of a field study conducted at an Islamic educational institution, to be precise at Samarinda 8 Vocational High School. In this study, the subject was one of the Public Relations Teams that ran the management of the information system at the school. From the results of this study obtained an explanation of the Application of Information Systems in Samarinda 8 Vocational High School as follows:

> This school already has an information system to convey adequate and developed information and data processing. Application of an Information System located at Samarinda 8 Vocational High School, which all levels of society can easily access to obtain compatible and accurate information.

> The information system that exists at this school, besides the website, there is also social media which already has a wide reach and is easily accessible to the general public and the mass media. For mass media, we have a radio station, namely Gema Surya, to convey information and input criticism and suggestions for the future of this school.

As for those who are authorised and constrained in carrying out and dealing with information system problems:

> The school has formed a special team, namely the public relations team, which is responsible for implementing, planning, and recording the agenda and administration for receiving complaints from the public regarding the information system and the delivery of applicable information.

> The obstacle that usually occurs is how we see different segments in the community, so there is a need to update the information so that the community can clearly understand the information the school has uploaded. And sometimes, there is miscommunication between the teams that make coverage or information that is not immediately conveyed by the general public.

Conclusion

An Education Management Information System is a system consisting of a group of people, guidelines, and data processing devices, which monitors and retrieves data from the environment, obtain data from transactions and operations within the organisation, and filter, organises, and selects data and presents it as information to education/school stakeholders, especially education managers at all

levels and organisational functions, to support decision making in carrying out management functions, to support communication, and to support operational activities, including instructional activities.

The basic concept of management information systems Educational institutions in Indonesia are socially oriented organisations. The social orientation of education aims to improve the intelligence of the nation. Thus, these educational institutions must continually develop better information systems to produce quality graduates (outcomes) (Setyanto et al., 2019).

Then it can be concluded from the interviews conducted at Samarinda 8 Vocational High School that the school already has an adequate information system and continues to grow yearly. The team is in charge of carrying out the implementation of information systems as well as conducting research and collaboration to improve the quality of existing information further. The community can easily access existing information because not only through websites, schools also provide social media and mass media to upload information accurately and systematically.

The suggestions that can be given concerning the results of this study are in the implementation of management information systems when encountering obstacles can be resolved in a more efficient time; for the management of management information systems hopefully can always develop research and cooperation with other authorised parties.

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