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THE ROLE OF EDUCATION MANAGEMENT INFORMATION SYSTEMS (SIMDIK) IN IMPROVING LEARNING QUALITY IN SENIOR HIGH SCHOOL

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Abstract

This paper aims to analyze the role of education management information systems in improving the quality of education in high schools. This type of writing is a literature study. Data is collected from various sources both books, websites, or scientific articles contained in Google Scholar. After the data is collected, data selection is carried out, and with concludes. Then the data is analyzed descriptively and continued with content analysis. The results showed that there are several roles of the education management information system in a school including as a tool in helping to improve educational standards, as an effort to mature humans so that they can get closer to the Creator through teaching and guidance which is a benchmark for the quality of education, helping in the operational process of schools that have been designed by current educational criteria, and support the smooth running of information that wants to get accurate results.

Keywords: Role, education management information system, education quality

Abstrak

Tulisan ini bertujuan untuk menganalisis bagaimana peran sistem informasi manajemen pendidikan dalam peningkatan mutu pendidikan di sekolah menengah atas. Jenis tulisan ini adalah studi pustaka. Data dikumpulkan dari berbagai sumber baik buku, website ataupun artikel ilmiah yang terdapat dalam google scholars. Setelah data terkumpul, dilakukan seleksi data, dan dilanjutkan dengan penarikan kesimpulan. Kemudian data dianalisis secara deskriptif dan dilanjutkan dengan content analisis. Hasil penelitian menunjukkan bahwa Terdapat beberapa peran dari sistem informasi manamejen pendidikan dalam suatu sekolah diantaranya sebagai alat dalam membantu peningkatan standar pendidikan, sebagai upaya dalam mendewasakan manusia sehingga mampu lebih dekat dengan Sang Pencipta melalui suatu pengajaran serta adanya bimbingan yang merupakan tolak ukur kualitas pendidian, membantu pada proses operasional sekolah yang telah dirancang sesuai dengan kriteria pendidikan saat ini, serta mendukung pada kelancaran informasi yang ingin mendapatkan hasil akurat.

Kata kunci: Peran, sistem informasi manajemen pendidikan, mutu pendidikan

INTRODUCTION

In the context of education at the senior high school (SMA) level, good management is key in ensuring the quality of education produced. One crucial aspect of education management is the use of the Education Management Information System (SIMDIK), which is designed to improve the effectiveness and efficiency of data management and decision-making. SIMDIK enables more structured management of academic, administrative, and human resources data, thus supporting the achievement of better educational goals.

Along with the development of information technology, the implementation of SIMDIK in educational institutions, especially in senior high schools, is becoming increasingly important. As stated by Loilatu et al, the implementation of a competency-based management information system is an absolute necessity that can provide a competitive advantage for educational institutions (Haitao, 2022). With a good management information system, educational institutions can ensure the continuity of operations and the quality of education provided. This information system is not only tasked with handling transaction processing but also providing relevant information support for management in the decision-making process (Zamroni, 2022). In the face of global competition, improving educational performance in the future requires the support of information technology that not only serves as a tool but also as the main weapon to achieve success in the world of education (Handayani et al., 2024; Prasetyo et al., 2023).

In some previous research, various studies have highlighted the importance of SIMDIK in improving the quality of learning in educational institutions. For example, research conducted by Akpur, (2020) showed that effective implementation of SIMDIK can improve the efficiency of academic and administrative data management in high schools, which in turn has an impact on improving the quality of learning. Meanwhile, research by Forniawan & Wati, (2024) emphasized that SIMDIK can assist schools in optimizing their human resources and facilities, thus creating a more conducive learning environment.

Another study by Miqwati dkk., (2023) revealed that the use of integrated SIMDIK can support faster and more precise decision-making by school management, especially in terms of curriculum management and student performance assessment. On the other hand, research by Fadilurrahman dkk., (2021) found that SIMDIK can increase parental involvement in the education process, through providing easier access to their children's academic information. In addition, research by Zastrozhnikova, (2019) showed that good SIMDIK implementation can increase transparency and accountability in school management, thus building trust from various stakeholders, including students, parents, and the community. Furthermore, research by Amin, (2023) emphasizes the importance of training and capacity building for school staff in using SIMDIK, so that the system can be optimally utilized.

However, several studies have also shown that there are challenges in the implementation of SIMDIK in senior high schools. Research by Barykin dkk., (2020) noted that the lack of adequate technology infrastructure and budget limitations are often the main obstacles

in SIMDIK implementation. In addition, research by Wahyuni dkk., (2024) found that resistance to change on the part of school staff can also hinder the effective adoption of SIMDIK.

This study differs from previous studies in several ways. First, this study focuses on analyzing the role of SIMDIK in improving the quality of learning comprehensively, by considering management, technical, and psychological aspects that affect the effectiveness of SIMDIK implementation in SMA. Secondly, this study also considers the roles and challenges faced by teachers and school staff in implementing SIMDIK, and how it impacts the quality of learning. Third, this study uses both qualitative and quantitative approaches to get a more comprehensive picture of the effectiveness of SIMDIK in senior high schools.

The novelty of this study lies in the holistic approach used to analyze the role of SIMDIK in improving the quality of learning in senior high schools. This study not only highlights the technical aspects of SIMDIK but also emphasizes the importance of change management and training for school staff in maximizing the potential of SIMDIK. In addition, this study also identifies factors that support and hinder the implementation of SIMDIK and offers solutions that can be implemented by schools to overcome these challenges.

The urgency of this research is very high, given the rapid development of information technology that requires educational institutions to adapt in order to compete at the global level. Effective use of SIMDIK can be a key factor in improving the quality of education in high schools, which in turn will produce graduates who are better prepared to face challenges in the world of work. Therefore, this study is expected to make a significant contribution to the development of management information systems in high schools, as well as a reference for policymakers in implementing SIMDIK in educational institutions.

The purpose of this study is to analyze the role of SIMDIK in improving the quality of learning in high schools, with a focus on identifying factors that support and hinder the implementation of SIMDIK. In addition, this study also aims to develop recommendations that can assist schools in optimizing the use of SIMDIK, so that it can have a greater positive impact on the quality of education in SMA. Thus, this research is expected to provide new insights into the development of education management in Indonesia, especially at the senior high school level.

From the explanation above, the purpose of this paper is to find out and analyze how the role of management information systems exists in educational institutions, especially in high school behavior. So that this paper can provide the scientific treasure of the importance of managing information management for the smooth running of existing programs in certain educational institutions.

METHOD

This research is a literature study on the role of education management information systems to improve the quality of education in senior high schools. Data were collected from various sources including books, websites, or scientific articles found in Google

Scholar. After the data is collected, data selection is carried out, followed by a conclusion (Jaya, 2020). Then the data was analyzed descriptively and continued with content analysis.

RESULTS AND DISCUSSION

1. Definition of Education Management Information System (SIMDIK)

The Education Management Information System or in case abbreviated as SIMDIK is essentially an information system that functions to assist in every management need in an educational institution, in this case, a school or madrasah, namely TK/RA, SD/MI, SMP/MTs or SMA/MA. SIMDIK is developed in an integrated manner starting from the operational activities of new student registration, academic processes, and financial management, to those related to student operations when they become alumni. SIMDIK is a school or madrasah operational process that is designed based on JARDIKNAS (Hanan dkk., 2024; Syifauzzuhrah dkk., 2023). every need related to reporting from schools or madrasahs to the Regional Education Office or the Ministry of National Education can be done easily and controlled with SIMDIK.

SIMDIK can be said to have run optimally if every element of the educational institution can use and utilize the system. For example, related to the availability of integrated facilities or integrated into one starting from the database of students, teachers, guidance and counseling, student cards accompanied by barcodes, attendance lists of students, teachers or employees, student grades where report cards are automatically programmed. In addition, in educational institutions there is an SMA gateway system application or what is often called SMS smart school. The existence of the system can provide convenience because it is managed independently by educational institutions so that access costs are cheaper and more affordable. With the existence of SMS smart school guardians of students can receive reports automatically from educational institutions (Meriyati dkk., 2022; Sundari, 2023).

In an article by Sonia, it is explained that SIMDIK in educational institutions is a supporter of management function activities consisting of planning, organizing, staffing, directing, evaluating, coordinating, and budgeting. In the development of management information systems in educational institutions, it can be said that it is very necessary (Putro, 2024). This is because to face the globalization competition of educational institutions with demands to provide more accurate, fast, and convenient information. It is also part of the service quality to make its advantages in competing in educational institutions (competitive advantage). Competitive advantages can be achieved if the institution can provide services or services that meet customer needs so that customers become satisfied with the services provided. In addition, users of educational services are also satisfied with the results obtained and competitive outcomes.

Based on the explanation above, the author concludes that SIMDIK, or education management information system is an integrated system that is useful for assisting in carrying out various activities related to the management of educational institutions both in terms of managing a student's score where report cards or learning outcomes have been automatically systemized, related to attendance for both students and teachers and other

educational institutions and other activities related to educational programs. The existence of SIMDIK can become a tool so that the education system runs smoothly and the quality of education quality always increases.

2. The Role of Education Management Information System (SIMDIK)

Regarding the role of SIMDIK according to Ujung et al in their work, it is explained that SIMDIK in a system has a role, namely to become a tool in helping to improve educational standards. The existence of educational standards is an effort to mature humans so that they can get closer to the Creator through teaching and guidance which is a benchmark for educational quality (Ilham & Yuniarti, 2022). SIMDIK is also said to be very instrumental in an educational institution which is very helpful in the school operational process which has been designed by current educational criteria. Thus it can be easily accessed because it is technology-based. The existence of SIMDIK also has a role in supporting the smooth flow of information that wants to get accurate results.

It should also be noted that management in an organization has three roles, namely interpersonal roles, informational roles, and roles as decision-makers. The interpersonal role is intended to foster a climate of solidarity and togetherness in the organization. This role can be seen in three forms, namely (1) a symbolic role, where it will result in management's willingness to engage in various social and ceremonial activities. (2) The role of a leader, where the ability to lead effectively will determine the success or failure of the organization. (3) The role of a liaison, where management receives information from outsiders and vice versa provides information to outsiders about the organization it leads (Saputra, 2022; Wisanti, 2022).

The second role is informational. In its position as a leader in the organization, management monitors the flow of information, in addition to being a recipient and disseminator of information. The last role is as a decision maker, both strategic, functional, and technical operations. All the roles mentioned above will be able to be played by management with a high level of effectiveness if before and during playing this role all types of information needed by the management of an organization are available.

3. Benefits of Education Management Information System (SIMDIK) in Learning

Regarding the benefits of SIMDIK, the following researchers present based on previous research that researchers consider to have relevance to this paper:

Table. Benefits of SIMDIK

TIARA SAFIRA EMANI DKK, "RUANG LINGKUP SISTEM INFORMASI PENDIDIKAN" helpful in terms of implementing DALAM LEMBAGA PENDIDIKAN", PROMIS 3, NO. 1, 2022, HAL. 99-109. educational institutions, increasing competitiveness and student services, being an example of technology utilization, and facilitating the exchange of information.

ANNISAH DKK, "EVALUASI PROGRAM SISTEM INFORMASI MANAJEMEN DALAM MENINGKATAN MUTU PENDIDIKAN", MADANI: JURNAL ILMIAH MULTIDISIPLIN 1, NO. 4, 2023, HAL. 116-122. FUJI RAHMADI DKK., " PENGEMBANGAN MANAJEMEN SEKOLAH TERINTEGRASI BERBASIS SISTEM INFORMASI DI SUMATERA UTARA", FITRAH: JOURNAL OF ISLAMIC EDUCATION, 2, NO. 2, 2021, HAL. 96-109. HTTPS://DOI.ORG/10.53802/FITRAH.V2I2.64 FADHEL MAULANA & INES HEIDIANI IKASARI, "PERAN SISTEM INFOMASI MANAJEMEN PADA SEKOLAHAN", JURIHUM: JURNAL INOVASI DAN HUMANIORA, 1, NO. 1, HAL.

Increased effectiveness and accurate efficiency, improved quality of human resources, increased productivity, and cost-effectiveness i the organization.

Streamline and facilitate implementation of administrative administration

Optimizing administrative management, improving academic supervision, monitoring student performance, and utilizing technology in the learning process.

About the table above, the author can explain again that the existence of SIMDIK can provide benefits including assisting in the implementation of activities and operations of educational institutions, increasing competitiveness and student services, being an example of technology utilization, facilitating the exchange of information, increasing effectiveness and accurate efficiency, improving the quality of human resources, increasing productivity and cost-effectiveness in organizations, facilitating and facilitating the implementation of administrative administration, improving academic supervision, and monitoring student performance (Putro & Subiyakto, 2023; Wydyanto, 2022).

The first is related to the benefits of SIMDIK as a support for the implementation of activities and operations of educational institutions. It can be said that SIMDIK is indispensable in educational services because as the author has explained earlier SIMDIK acts as a supporter of management function activities which include planning, organizing, staffing, directing, evaluating, coordinating, and budgeting. In addition, SIMDIK can become a forum for facing global competition in educational institutions with demands to provide accurate, fast, and convenient information. The utilization of SIMDIK can create competitive advantages which can only be achieved if the institution provides services according to the needs of customers so that they get a sense of satisfaction with the services provided.

The second is related to the benefits of SIMDIK as an increase in competitiveness and student services. This is because SIMDIK can provide convenience, especially for students in accessing the information needed. Moreover, the flow of globalization is increasingly rapid so in the aspect of the world of education, it must be as soon as possible to improve the information system to support the competitiveness of human resources obtained from related educational institutions. It should also be noted that the information

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system created must be balanced between the available technological infrastructure and the capabilities of existing human resources to prevent imbalances and make information systems unable to materialize significantly in supporting the quantity or quality of education fundamentally.

The three benefits of SIMDIK are an effort to utilize technology. It is used so that every activity carried out can run effectively and efficiently, especially in educational institutions. Currently, educational institutions are required to be able to implement and develop information and communication technology so SIMDIK is one of the strategies that can be used in controlling management in an educational institution. The application of management information systems can act as a major factor in supporting educational institutions, especially when facing global competition as the author has explained earlier. From that, utilizing technology is said to be the main solution for managing management in schools or other educational institutions. So the use of technology in the form of a management information system can realize optimal and effective education management. This is because the process of carrying out each activity or exchanging information is carried out easily because of SIMDIK.

Fourth, the use of SIMDIK as an accurate increase in effectiveness and efficiency, improving the quality of human resources and increasing productivity and cost savings in the organization. Often the author says that SIMDIK can create or facilitate each activity so that it is effective and efficient. With the role of technology, especially in management services in an educational institution, human resources have increased because the skills that exist in a person can be trained to continue to be improved through the use of technology. The use of technology in the form of SIMDIK can also save costs because it is more utilized according to needs and abilities.

The fifth function of SIMDIK is to facilitate and facilitate the implementation of administrative administration. Musdalifah et al. explained that business administration is the most important component of an educational institution. The existence of business administration which acts as the coordinator of each section and is directly responsible for the management of the principal which includes data collectors, data input, data storage, and all activities related to school operators. Thus it can be said that educational institutions cannot achieve the expected goals without the role of the administration. From this, the presence of SIMDIK can accelerate all matters carried out by the school administration so that every activity needed by the school can be completed effectively and efficiently.

The sixth function of SIMDIK is to improve academic supervision and monitor student performance. In the learning process, improving academic supervision is very important, this aims to support effective academic supervision. So that the existence of a management information system allows educational institutions to record and analyze student academic data which includes grades, attendance, and participation in extracurricular activities. The existence of information provided in real-time helps teachers and educators to monitor students' academic progress. The existence of student performance monitoring aims to monitor student performance more effectively so that

the management information system allows schools to identify students who need special attention, reward outstanding students, and adopt corrective actions if needed.

4. Drivers and Barriers of Education Management Information System (SIMDIK)

Regarding the driving factors of the implementation of SIMDIK, the author first compiles several previous research articles from various research sites which the author then interprets (Ilham & Yuniarti, 2022). First, the research article by Sholechan where the research took place at the Al Ummah Jombang Integrated Islamic Junior High School revealed that the supporting or supporting factors of the management information system are the completeness of facilities and infrastructure, for example, such computers, internet and data, the availability of human resources who are experts in operating education management information systems. Second, the research article by Loryana and Mohammad explains that the driving or supporting factors of the implementation of management information systems are the completeness of supporting facilities such as hardware and software, cost capabilities, competent human resources, and support from external parties of the school.

Ridwan in his research article with a research site at Madrasah Aliyah Negeri Tanjung Jabung Barat Regency, Jambi Province explains that the driving factor for the implementation of SIMDIK utilization is the existence of the SIMPATIKA system to collect data both related to student data and teachers and education personnel. In addition, there is cooperation with various parties both related to matters of facilities and infrastructure or related to human resources to support educational institutions in implementing the digitization system. Putra in his research article with a research site at SD Negeri 1 Kertha Mandala explains that the driving or supporting factors for the implementation of SIMDIK are a conducive atmosphere that allows the principal to coordinate to recommend his planning, the existence of continuous motivation for breakthroughs to be able to complete the infrastructure at school, the existence of organizational guidance from the agency on the duties and competencies that must be developed by the principal, the realization of the school's vision and mission so that it becomes a guide in realizing each school program and the development of teacher competencies that have received competency certificates (Dannur, 2024).

Based on some previous research articles above, the author can interpret that the driving factors for the implementation of SIMDIK are the completeness of facilities and infrastructure, the availability of skilled human resources, cost capability, support from external parties, the existence of the SIMPATIKA system to collect data both related to student data or teachers and education personnel, a conducive school atmosphere, motivation, coaching, and realization of the vision and mission at school. The author agrees with some of these supporting factors because if some of these supporting factors are lacking in a school, the implementation of SIMDIK will not run optimally. Moreover, if the existing facilities and infrastructure as well as human resources lack expertise, the implementation of SIMDIK may not be realized so there needs to be more efforts to match some schools that have already implemented SIMDIK.

Next, the inhibiting factors of SIMDIK consist of the quality of human resources, facilities and infrastructure, and operational funds. Human resources are individuals who are productive and work in a particular institution or organization and have a function as an asset so their skills must be developed. The existence of human resources that are always trained or developed, individuals have the knowledge, attitudes, and expertise to handle all aspects that occur to achieve the goals of the institution or organization concerned. Thus, if human resources are less able to meet all that is needed, it will become an obstacle for an institution or organization (Firmansyah dkk., 2023).

Next is the infrastructure in a school, for example, a school is said to be of high quality if it has adequate facilities and infrastructure. This is because infrastructure is a support for teaching and learning activities to achieve the goals to be achieved. So infrastructure facilities have a major influence in terms of improving the quality of education (Rahmawati dkk., 2023). From this, based on the author's view, if the school has inadequate facilities and infrastructure, it will affect the obstruction of the education management system carried out in a school. Furthermore, operational funds are important from the author's point of view because operational funds can fulfill all aspects needed, including completing facilities and infrastructure that are not yet available (Hanafi & Rohaemi, 2024). In the absence of operational funds, especially in the management information system, every device owned does not experience development or in this case cannot improve the quality or available devices. In the end, without operational funds, it can hinder the management information system process that is carried out.

CONCLUSION

There are several roles of the education management information system in a school including as a tool in helping to improve educational standards, as an effort to mature humans so that they can get closer to the Creator through teaching and guidance which is a measure of the quality of education, assisting in the school's operational processes that have been designed by current educational criteria, and supporting the smooth flow of information that wants to get accurate results. The existence of a management information system in schools brings several benefits including assisting in the implementation of activities and operations of educational institutions, increasing competitiveness and student service, being an example of the use of technology, facilitating the exchange of information, increasing accurate effectiveness and efficiency, improving the quality of human resources, increasing productivity and cost-effectiveness in organizations, facilitating and facilitating the implementation of administrative administration, increasing academic supervision, and monitoring student performance.

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