Optimizing Management Information Systems Based on Efficiency and Quality Management

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Abstract
The purpose of this research is to explore the increase in efficiency and quality of management in optimizing the application of management information systems at MAN 1 Sungai Full. This research uses qualitative research, and data collection techniques through observation, interviews, and documentation. Data analysis techniques used are data reduction, data presentation, and data verification. The results of this study indicate that the management of optimizing the implementation of management information systems at MAN 1 Sungai Penuh collects data containing teacher and staff data to manage important information about teaching staff and staff registered at the school such as biodata, rank, position, address, working status, hours work history, educational history, career history, training history, attendance rate, salary info and others, management information systems related to student services in the form of New Student Admissions data, student biodata, Management of Student Class Promotion (manual or automatic), Graduation Management / Alumni, Printing Student Cards, and Management of Student Discipline, and information systems related to teaching and learning activities such as Information Systems containing Curriculum Management, Scheduling of Teaching Units, Management of Student Academic Grades and reports on Student Study results, and Student Presence in teaching and learning activities.

Keywords:
Efficiency, Quality, Management Information Systems.

Kata kunci:
Optimalisasi, Sistem Informasi Manajemen, Efisiensi dan Kualitas

Abstrak.
Tujuan dalam penelitian ini untuk mengetahui bagaimana optimalisasi efisiensi dan kualitas manajemen sistem informasi di MAN 1 Sungai Penuh. Adapun jenis penelitian yang digunakan yaikni penelitian kualitatif, teknik pengumpulan data melalui observasi dan wawancara. Teknik analisis data yang digunakan adalah reduksi data, penyajian data, dan verifikasi data. Berdasarkan hasil temuan yang diperoleh bahwa dalam melakukan optimalisasi sistem informasi manajemen di MAN 1 Sungai Penuh ini dengan melakukan pendataan terlebih dahulu yang berisi data guru dan staf untuk mengelola informasi-informasi penting terkait tenaga pengajar dan staf tentunya telah terdaftar di sekolah seperti halnya biodata yang berisi nama, pangkat, jabatan, alamat, status bekerja, jam kerja, riwayat pendidikan, riwayat karir, riwayat pelatihan, tingkat kehadiran, info gaji dan lain-lain. Sistem informasi manajemen ini juga berupa optimalisasi pelayanan siswa berupa informasi penerimaan siswa baru, biodata siswa, pengelolaan kenaikan kelas siswa, pengelolaan lulusan atau alumni, pencatatan kartu untuk siswa, pengelolaan kaderismin dan sistem informasi yang tentunya berkaitan dengan kegiatan belajar mengajar seperti sistem informasi yang isinya pengelolaan kurikulum, penjadwalan mat pelajaran, pengelolaan nilai akademik siswa dan laporan hasil studi siswa serta presensi siswa dalam kegiatan proses belajar mengajar. Sehingga dalam mengoptimalkan efisiensi dan kualitas manajemen pada sistem informasi manajemen ini sudah berjalan dengan cukup baik dan akses penginputan informasi-informasi juga sudah terlaksana, baik guru dan siswa dapat dengan mudah mengakses seluruh informasi yang ada di sekolah.
INTRODUCTION

Education absolutely cannot be separated from management information systems because this applies without exception to educational institutions for the sustainability of these institutions. Everyone agrees that information management is something that is really needed by every social government institution, including educational institutions (Ismail & Sinen, 2017). Therefore, education requires a tool to make information practical in forming a much better education, one of which is a scientific discipline, namely the education management information system. (Arista et al., 2023; Hariri et al., 2016).

Generally, this information system describes a collection of parts that interact and collaborate to achieve convincing goals. In management, information that has been processed can be of value to its users called information (Kusumawati & Waeo, 2016). The urgency of this, the Minister of National Education No. 20 of 2006 article 4 points H explains that one of the primary tasks of the Education environment work unit is to manage the supervisory management information system in the education sector to its maximum potential. From the message of this law, educational institutions represent various information system needs of each educational institution by utilizing supporting platforms such as Email, Yahoo, Facebook, WhatsApp, and so on (Ramadhani, 2018).

It is one of the factors that indeed influences the quality of governance of an educational institution. It confirms the results of research by Supriyani et al. The leaders can determine the quality of the institution they lead from the extent to which they can maximize the information system as a service and marketing (Brooks & Ezzani, 2022; Estiani & Hasnah, 2022; Supriani et al., 2022). Other research states that the success of educational governance lies in the quality of good administrative services; the administrative services in question are how responsive, communicative, and respectful there are between the institutions and customers (Kurniawan & Syahrini, 2021). Another strengthening of the importance of management information by Zamron is human resources can utilize technology and digitalization as communication and information tools to speed up services and solutions to reduce the operational numbers of institutions, especially private educational institutions, as supporting goals in the education sector (Zamroni, 2020). Apart from the Human Resources, Leadership, and academic responsibility variables, Hulu Symbolon emphasizes that the development of any best information technology system must still maintain the needs and capabilities of the institution, the resources, and the budget, is not a new problem for educational institutions so that the information system can function accurately (Hulu et al., 2020; Ro’is & Rokhman, 2021; Satriawati et al., 2023).

Based on initial observations at MAN 1 Sungai Penuh, researchers found that there was a management information system as an effort to develop services specifically designed by MAN 1 Sungai Penuh where the information technology provided several activities and reporting from data collection related to the information needed for internal and external interests of the school. This research aims to cover the gap in previous studies, that the success of earlier educational information systems from the perspective of human resources, the leadership of educational institutions, and how responsive educational administrators are, so this research focuses on optimizing information systems in educational institutions and how to take strategic steps. These institutions achieve efficiency and quality of educational services it's hoped that this research will be a strategic contribution so that it becomes additional options and recommendations for
educational institutions under the Ministry of Religion that have relatively the same characteristics, especially private religious educational institutions.

RESEARCH METHODS

This qualitative descriptive research focuses on the subject's behavioral processes following the problem. This qualitative research is also said to be field research or field research with the aim of understanding in depth a phenomenon, meaning, process, and context in the field using a case study approach carried out at MAN 1 Sungai Penuh (Sugiyono, 2014). Data collection uses in-depth and structured interview techniques with primary informants, the principal and head of the IT department, who were considered to represent both structurally and competently and were experts in the educational institutions from June to July 2023 (Sugiyono, 2014).

The need for data validity in this research uses triangulation of sources obtained through primary informants through observations, interviews, and documentation, that the researcher gathers as much information as achievable to match the findings naturally and then explores the meaning of what implies according to the researcher's interpretation through what happened in the field (Arikunto, 2011).

Results and Discussion

Optimization of Management Information Systems at MAN 1 Sungai Penuh

Information system management is what is done by the parties directly concerned, especially the leadership of an educational institution itself. A leader who can be held responsible for the management of an educational institution must be able to collect, store, manage, retrieve, and display information as material and in the decision-making process. Through knowledge and data that they can use independently or referred to as morally responsible answers, leaders of educational institutions can access themselves and take responsibility for the judgments.

This system is a combination of various elements related to each other; there are two systems of approaches that represent the approach that focuses on procedures, and there is a working relationship that is interrelated so that it appropriate steps, then the approach which focuses on elements of the system itself, meaning that this is more characteristic and more accepted by all types of groups, this is in line with what the principal said as follows:

“As principal, I use a management information system to implement a policy that requires all students to get a library card. This application is related to student management. MAN 1 Sungai Penuh has implemented an information system related to student management, as evidenced by the school policy that requires every student to have a student card to serve as a guide for students and an identity card that can be used as collateral when borrowing books in the school library and other services" (Interview, June 20, 2023).

The explanation above confirmed that MAN 1 Sungai Penuh has implemented an information system related to student management, the existence of a school program that requires every student to have a student card as a reference and an identity card that can function to activate all school services, this is done as an integrative step between services at the school, the head of IT further explained:

"To create a school with a good information system, our responsibility as the staff is to implement all school programs quickly and precisely. "For example, when making a student card online from home, we
provide an application that is downloadable on all students' cell phones. Likewise, if there are problems, we prepare a call center and guidebook for easy access (Interview, 20 June 2023).

From the presentation of the Head of IT, the school indicated optimization is by using student cards as personal identification and a medium for utilizing all systemic school services and making practical use of technology and digitalization. Furthermore, in the interview with the principal, he stated that he tries to meet the school's needs by preparing a guidebook containing service targets through planning, technical guidance, and evaluation regularly, and preparing this service for teachers for reporting needs. I do all of this for their performance and career needs to support the school's quality (Interview, 20 June 2023) it is appropriate to the results of the researcher's observations that the form of planning above records in the form of guidelines in which there are flow charts and regular targets in the short, medium, and long term. The form of evaluation is carried out by meeting every six months. This meeting is attended by the principal, head of student affairs, head of curriculum, and head of IT (Observation, 5 June 2023).

These guidelines form an integral part of the service needs of students and teachers and facilitate understanding of services with a basis for responsibilities and rights between students and teachers. For students and teachers, this can facilitate access to services that are not limited by space and time so that students and teachers efficiently maximize school resources to achieve the function and quality of educational institutions.

"I am always required to continue to develop teachers' integrative services both for their internal and external administrative service needs, for example with our new service with an online payroll system, assignments, practicums and online learning reporting, a licensing system, leave and a direct suggestion box connected to several related leaders (Interview, 20 June 2023)."

The school has made every effort to implement an information management system by providing things related to the needs of teachers and students. Including the need for curriculum access and input, schedule making, and the teaching and learning process. but the problem is the use of information media has not been applied because of the human resources. Meanwhile, based on the results of findings that occurred in the field through direct observation data that.

"The implementation of the Education Management Information System at MAN 1 Sungai Penuh so far still requires a lot of improvement and evaluation, including the use of information boards and the use of the library as an information medium for teachers and students due to limited books and space. Likewise, the computer lab cannot function efficiently due to limited human resources, as well as the use of the laboratory cannot function properly due to limited information media, and other teaching aids and the only information media is the amplifier. sound, such as this is certainly not effective in implementing a good and appropriate information system "This school needs staff who are experts in managing the implementation of information systems in this school so that it can meet the school's needs in presenting information and services at MAN 1 Sungai Penuh (Observation, 20 June 2023)."

In line with Puji Lestari's opinion in her findings that in implementing a management information system, there is a network of data management procedures that starts with data collection, data retrieval, and information dissemination using various tools that can provide sources of information any time effectively and efficiently so that the basis for making policies can achieve the goals of the institution concerned (Lestari, 2017).

The management information system consists of planning, implementation, and evaluation in educational institutions, planning to improve the quality of learning services and the products produced. The practice of this management information system occurred and was not
managed optimally. Furthermore, there is an evaluation of the management information system which refers to the latest Ministry of National Education management standards which contain data or information that must be consistent and accurate (Mayasari et al., 2021). So, the form of a management information system in schools is:

**Table 1 Forms of Optimization**

<table>
<thead>
<tr>
<th>Educational institutions</th>
<th>Customers</th>
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<tbody>
<tr>
<td>1. Have a technology and digitalization-based service policy</td>
<td>Student; Multi-purpose card (Chip), which is integrated with all educational institution services</td>
</tr>
<tr>
<td>2. Planning guidelines, implementation mechanisms, and evaluation standards</td>
<td>Teacher; Socialization and assistance in the use of management information systems to improve teaching and learning activities and the need for teacher career advancement.</td>
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<tr>
<td>3. Tools form integrative applications</td>
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According to (Kartiko et al., 2023) there are several conveniences in establishing a management information system in schools, including: For the school 1) information management system the process of managing academic and non-academic data. 2) Providing a report on student progress in the teaching process. 3) Provide a report on teacher progress in activities 4) learning. 5) Become a guide for making school regulations. 6) Serves as a means of communication between the community and parents of students without time and place restrictions. 7) Become a promotional media that introduces the school. 8) As a means of expanding information or knowledge.

For students: 1) Society Provides a medium for students to monitor developments both in terms of academic and non-academic aspects. 2) Society Provides a medium for students to monitor developments presented at school and improve student achievement through a database of learning materials and practice questions (Furlan & Cristofolini, 2022).

It can be concluded that for the growth and development of an educational institution, a management information system is needed but if the implementation has not been effective and efficient, then it has not been successful. Therefore, human resource information systems can actually be designed to help make more effective decisions.

**DISCUSSION**

**Optimizing the Efficiency and Quality of Information Systems Management at MAN 1 Sungai Penuh.**

Management information systems consist of planning, implementation, evaluation in educational institutions, and planning to improve the quality of learning services and products. With the management of this information system, you can optimize the quality and accuracy of managing the systems in educational institutions.

Information system management is essentially carried out by the parties directly concerned, especially the leadership of an educational institution itself. A leader who can be held responsible for the management of an educational institution must be able to collect, store, manage, retrieve, and display information as material and in the decision-making process. Through knowledge and
data that they can use independently to refer to morally responsible answers, leaders of educational institutions can access themselves and take responsibility for the judgments. This information network is intended to implement management functions, especially for school principals or leaders of school institutions who determine the right decisions so that this management information system can help implement management functions from all parties involved in the school.

The existence of this management information system provides smoothness and support for all activities in educational institutions, especially in teaching and learning activities between educators and students in achieving hopes and goals in a formal educational institution. It has an information system to deal with all changes and developments in Indonesia and is also one of the reasons for implementing this system to facilitate school operations (Loilatu et al., 2020). Human resources and utilizing information technology in the educational process, improving academic performance in the future requires information and technology systems that not only function as supporting facilities but also as the main tool in supporting success in the world of education can compete globally (Zamroni, 2020).

Management information systems are used in the realm of performance to utilize technology related to information and prepare data that is the latest and most updated information to provide information in the field of education (Eriana & Farizy, 2021). The school management information system is the spearhead in implementing all the updated information with support for all existing systems in each school. In its implementation, the implementation and efforts in planning management information systems in academics and the management context, it is very important to improve the quality of education (Mayasari et al., 2021).

It is important to manage management information systems in agencies or institutions because this is an effort to facilitate the activities of educators and school principals in carrying out each lesson (Sirojuddin et al., 2022). The management of an information system to provide information to support decision-making in management activities (Frisdayanti, 2019). The development of management information systems in every educational institution is very important to be used in facing global competition for educational institutions which are required to provide information more massively, quickly, and accurately which has become part of the quality of service, so that it becomes an added value in the competition in the world of education (Sholechan, 2021).

Developing an information system must be analyzed according to the needs by designing and implementing it using several appropriate methods and website platforms (Kannan et al., 2022) so it is easier for everyone to find information related to school institutions. Furthermore, it needs human resources to manage the website (Al-Faraday et al., 2018). In an approach to this system, it becomes interesting to see developments in information technology and education that are the key to academic quality and indirectly also affect the quality of society (Pramungkas, 2020).

This is a combination of various interrelated elements; There are two representative approach systems, namely an approach that focuses on procedures, there is an interrelated working relationship so that the existing stages can be made according to appropriate steps, then an approach that focuses on the elements of the system itself (Alfaini et al., 2021). So, integration involving several elements is of course very closely related to the approach in implementing the management information system found in each school, which of course plays a very important role in the process according to the stages that have been implemented to receive information.
effectively and efficiently. As information systems become more widespread and continue to develop very rapidly, they can easily access any information contained in the field of education, especially in schools (Mohammed & Kinyo, 2022).

In an analysis of the research findings, viewing a management information system can be carried out by all agencies, institutions, and even government departments, which can also minimize several gaps in several problems that provide clear goals in its implementation so that it achieves optimally and efficiently and produces information that is useful in making every policy (B et al., 2023; Fauzi & Kartiko, 2023; Sidh, 2013). So, it is clear that this technology provides a lot of convenience in almost all walks of life, which also makes it easier for people to access and view information on social media, and the existence of a management information system it can make it easier to manage student data. Management information system makes administrative staff manage data well and a management information system that includes a database in the form of data on students, educators, facilities and infrastructure, educational staff, school financial data, and so on (Inggriani, 2020).

In another opinion, in implementing this school management information system, you should utilize other applications such as those implemented by MAN 2 Ponorogo with the existence of a teaching and education staff service by empowering a platform application in the form of the Ministry of Educator and Education Personnel Information System Religion, fingerprint applications for both teachers and students and website-based applications for accepting new female students (Sonia, 2020).

Implementing a management information system in schools certainly requires implementing several applications or platforms that help to accelerate the expansion of information to social networks, not only on notice boards but throughout social media so that the use of management information systems in schools This must run very effectively and of course run efficiently.

There is a discussion of findings from research researched by Vindi & Ahmad that several analyses of educators' perceptions in implementing management information systems in a process are part of the process that can be changed or transformed from input to output which is certainly useful (Arifin et al., 2023). To have quality output for users of management information systems in school institutions, of course, during this process, converting input into output must be done as well as possible. This is what enables educators to manage data to obtain information. This output brings the results of activities in the process that have been implemented in the management information system which produces information, and this must of course have good quality for information users because quality shows the appreciation or assessment used (Fasya et al., 2023).

Based on the findings at MAN 1 Sungai Penuh in optimizing the management information system at MAN 1 Sungai Penuh it is quite good because it is designed in such a way as to be a source of information related to school-related, at MAN 1 Sungai Penuh you can access related matters. by carrying out data collection first containing teacher and staff data to manage important information regarding teaching and staff, of course they have been registered at the school, such as biodata which contains name, rank, position, address, working status, working hours, educational history, history career, training history, attendance rate, salary info and more. This management information system also takes the form of optimizing student services in the form of information on new student admissions, student biodata, managing student class promotions, managing graduates or alumni, printing cards for students, managing discipline and
information systems which are of course related to teaching and learning activities such as information systems whose contents curriculum management, scheduling of teaching units, management of student academic scores and reports on student study results as well as student presentations in teaching and learning process activities.

In promoting schools, they have also used online information systems such as Facebook, WA, and other electronic media in the current information era. Based on the results of the interview above, the author can draw the following conclusions from the management information system, in efforts to implement the management information system, the school principal is still making several more significant changes, including infrastructure. The implementation of the management information system at MAN 1 Sungai Penuh, has been running quite well with ongoing efforts made by the school so that it will provide progress and development in the realm of education at the school, and in a development that is currently occurring so that can produce results and also continue to provide the best quality both in terms of teaching and providing services to all levels of society in the school.

Based on an analysis of the findings of this research, the management information system at MAN 1 Sungai Penuh is optimizing the efficiency and quality of management, especially the alternative in efforts to improve the management information system, namely by implementing student cards which function as student identification and guarantees for borrowing books. from the library, will produce school principals as the main controllers in the process of implementing education management information systems in schools. Teachers and employees implement management information systems at schools. They consistently strive to meet the needs of the teaching and learning process at MAN 1 Sungai Penuh in every school activity.

CONCLUSION

Based on the research findings and discussion, it concludes that the MAN 1 Sungai Penuh management information system optimizes management efficiency and quality, especially the alternative in efforts to improve the management information system, by creating a student card that functions as a student identification and guarantees for borrowing books from the library, will produce the principal as the main controller in the process of implementing educational management information systems in schools. Teachers and employees implement management information systems at schools. They consistently strive to meet the needs of the teaching and learning process at MAN 1 Sungai Penuh in every school activity.

This research can provide an assessment of an effort to strengthen management information systems in developing the provision of information to the public at school and outside school because basically, this information system facilitates an administrative system in the form of services at school. So, it is a factor that needs to be considered in implementing an education management information system so that it can produce services for its users, whether students, parents of students, or the community.

In research that has been carried out previously, there has been no discussion related to management information systems, especially at MAN 1 Sungai Penuh in optimizing management efficiency and quality, so in this case, the limitations of previous research can be examined in depth or detail in the discussion of management information systems, of course in optimizing efficiency and quality in management or management in education.
REFERENCES


