



## **STRENGTHENING MANAGEMENT INFORMATION SYSTEMS IN IMPROVING THE PERFORMANCE OF ADMINISTRATIVE STAFF**

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**Abstract:** Management Information Systems (MIS) play a vital role in optimizing administrative operations in education, including at MTsN 2 Bireuen. The effective implementation of MIS can significantly improve administrative staff performance. This study aims to analyze the management of MIS and its impact on the performance of administrative staff at MTsN 2 Bireuen, focusing on the aspects of planning, organizing, implementation, and evaluation. This qualitative research used open interviews, observation, and documentation for data collection that involved the headmaster, head of administrative affairs, 6 administrative employees, and 3 teachers at MTsN 2 Bireuen. Data analysis techniques included data reduction, presentation, and verification. The results indicate: (1) Planning: The MIS planning is well-executed, with clear goal setting, assessments, and alternative evaluations. (2) Organizing: The organizing process is effective, with clear task delegation, coordination, and organizational structure. (3) Implementation: Implementation involves communication, motivation, leadership, and alignment of goals. (4) Evaluating: Evaluating includes performance measurement, corrective actions, and feedback for process improvements. The management of MIS at MTsN 2 Bireuen positively affects administrative staff performance, with good implementation across all stages. This study provides insights for other educational institutions on developing effective MIS to enhance administrative efficiency and effectiveness, with recommendations for continuous improvement.

**Keywords:** Planning, Organizing, Implementing, Evaluating MIS

**Abstrak:** Sistem Informasi Manajemen (SIM) memainkan peran penting dalam mengoptimalkan operasi administratif di bidang pendidikan, termasuk di MTsN 2 Bireuen. Implementasi SIM yang efektif dapat secara signifikan meningkatkan kinerja staf administrasi. Studi ini bertujuan untuk menganalisis manajemen SIM dan dampaknya terhadap kinerja staf administrasi di MTsN 2 Bireuen, dengan fokus pada aspek perencanaan, pengorganisasian, pelaksanaan, dan evaluasi. Penelitian kualitatif ini menggunakan wawancara terbuka, observasi, dan dokumentasi untuk pengumpulan data yang melibatkan kepala sekolah, kepala urusan tata usaha, 6 pegawai tata usaha, dan 3 guru di MTsN 2 Bireuen. Teknik analisis data mencakup reduksi data, presentasi, dan verifikasi. Hasilnya menunjukkan: (1) Perencanaan: Perencanaan MIS dilaksanakan dengan baik, dengan penetapan tujuan yang jelas, penilaian, dan evaluasi alternatif. (2) Pengorganisasian: Proses pengorganisasian efektif, dengan delegasi tugas yang jelas, koordinasi, dan struktur organisasi. (3) Implementasi: Implementasi melibatkan komunikasi, motivasi, kepemimpinan, dan penyelarasan tujuan. (4) Evaluasi: Evaluasi mencakup pengukuran kinerja, tindakan korektif, dan umpan balik untuk perbaikan proses. Manajemen MIS di MTsN 2 Bireuen berdampak positif terhadap kinerja staf administrasi, dengan implementasi yang baik di semua tahap. Studi ini memberikan wawasan bagi institusi pendidikan lainnya tentang pengembangan MIS yang efektif untuk meningkatkan efisiensi dan efektivitas administrasi, dengan rekomendasi untuk perbaikan berkelanjutan.

**Kata Kunci:** Perencanaan, Pengorganisasi, Pelaksanaan, Evaluasi SIM

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## INTRODUCTION

Digital transformation has fundamentally changed the paradigm of educational sciences Sych (2021). In this era, the use of information and communication technology is no longer an option but a necessity to keep up with the times Mishna (2021). The education sector must continuously adapt to these technological advancements to remain relevant and effective in meeting current and future demands (Beech, 2018). The education sector requires a wise integration of information technology (Tondeur et al., 2016), and Management Information Systems (MIS) can be an effective solution for optimizing administrative processes in schools (Amuna et al., 2017).

This integration can streamline operations, improve communication between stakeholders, and enhance overall efficiency in educational institutions. By harnessing the power of MIS, schools can better manage resources, track student progress, and make data-driven decisions to drive continuous improvement. Additionally, the use of MIS can help schools comply with regulatory requirements, ensure data security, and provide a seamless experience for students, teachers, and administrators alike. As technology continues to evolve, the education sector needs to embrace innovative solutions like MIS to stay ahead of the curve and deliver high-quality education to students in the digital age.

One key benefit of MIS in educational institutions is the ability to streamline administrative tasks and improve overall efficiency. With features such as automated attendance tracking, grading systems, and communication tools, schools can reduce manual workloads and free up valuable time for teachers and staff to focus on student learning. Furthermore, MIS can help schools analyze data trends and identify areas for improvement, leading to more targeted interventions and personalized support for students. By leveraging the power of MIS, educational institutions can create a more student-centered learning environment that promotes academic success and overall growth.

Previous studies have shown that digital transformation enables better data management, allowing teachers and administrators to make faster and more accurate decisions based on real evidence, thereby improving learning outcomes (Sari et al., 2023). Transformational leadership is highly needed in the digital era, with school principals expected to lead change and adapt to technological developments (Maulidin et al., 2024). Furthermore, school principals play a crucial role in making strategic decisions related to MIS management, such as budget allocation, selecting appropriate systems, and creating policies on the use of information technology (Sulistiyorini et al., 2022). Previous research, such as that by Abualoush et al. (2018) and Fitriyani & Pahlevi (2023), has widely examined the role of MIS in enhancing employee performance. However, studies on the implementation of MIS in the educational sector, particularly in madrasahs, remain limited. This gap needs to be addressed by further research on how MIS can improve the performance of administrative staff, specifically at MTsN 2 Bireuen.

This study aims to examine the utilization of Management Information Systems (MIS) at MTsN 2 Bireuen, specifically focusing on four key areas: (1) Planning, (2) Organizing, (3) Implementing, and (4) Evaluating. The primary objective is to understand how MIS is implemented at MTsN 2 Bireuen to enhance the performance of administrative staff. It is anticipated that this research will contribute to the theoretical

development of MIS applications in educational settings and offer practical insights for school leaders on how to guide digital transformation efforts to improve administrative efficiency and effectiveness. Given the growing significance of technology in education, this study argues that the successful implementation of MIS is not solely contingent on the technology itself but also on the leadership and managerial competencies of the school principal in facilitating change and supporting staff adaptation. Consequently, the research will provide valuable recommendations for other madrasahs aiming to implement MIS effectively. This study will specifically focus on the role of the principal in the management of MIS implementation at MTsN 2 Bireuen while excluding other aspects of technology integration in the broader educational context.

## **LITERATURE REVIEW**

### **Management Information System**

Literally, a management information system is a form of information system that is intended to serve managers (Teubner & Stockhinger, 2020). A management information system is better known as an integrated system of humans and computer machines to present information to support organizational management operations and decision-making processes within an organization (Jarrahi, 2018). The essence of a management information system is contained in systematic work such as recording agendas, archiving communications between organizational managers, studying information for decision-making, and so on (Wainwright, Oates, Edwards, & Childs, 2018). As management information systems develop and managers' needs continue to change and increase, other systems develop.

Moreover, a management information system (MIS) is a system consisting of software, hardware, procedures, and people who work together to collect, process, disseminate, and store information in an orderly and neat manner. Necessary in the process of decision-making and organizational management (Awulor, Mallam-Obi, & Chukwu, 2022). MIS is used to organize and manage data, optimize business operations, and support effective decision-making (Jeble, Kumari, & Patil, 2017). MIS is a formal system that contains data resulting from organizational transaction activities, as well as providing reports and information that are relevant for management in decision-making. Management's ability to utilize information and carry out managerial functions also determines whether the management concerned achieves success in managing the organization they lead (Kowalczyk & Buxmann, 2014).

Based on the opinions of the experts above, it can be concluded that a management information system (MIS) is a system that involves software, hardware, procedures, and people who work together to collect, manage, and present information that is relevant to decision-makers in a company or organization. MIS also functions to optimize business operations and facilitate effective decision-making by providing timely and accurate information.

### **Implementation Of Management Information Systems**

The concept of a management information system refers to a framework and basic principles that involve the use of information technology to collect, manage, store, and retrieve information related to the management of an organization (Love, Matthews,

Simpson, Hill, & Olatunji, 2014). In the context of madrasa education and administration, MIS refers to the application of information and communication technology to support the management of administrative processes in madrasas.

The implementation of a management information system (MIS) in the madrasa context is the process of introducing, implementing, and integrating information and communication technology in madrasa administrative management. The aim of implementing MIS is to increase efficiency, effectiveness, and transparency in the management of various administrative aspects of madrasas.

### **Management Stages of Management Information Systems**

In the smooth process of management activities, stages are needed that are considered important. The stages that the author uses in managing management information systems to improve the performance of administrative staff are by applying management theory, namely planning, organizing, implementing (actuating), and supervision (controlling) (Meier, Favero, & Zhu, 2015).

#### ***Planning***

George R. Terry, in his book *Principles of Management*, states planning as follows (Giglioni & Bedeian, 2019):

"Planning is the selecting and relating of facts and the making and using of assumptions regarding the future in the visualization and formulation to proposed of proposed activation believed necessary to achieve the desired result".

#### ***Organizing***

Organizing includes the actions of 1) determining the resources and activities needed to achieve organizational goals, 2) process designing and developing an organization that will bring these things towards the goal, 3) assignment of certain responsibilities, 4) delegating authority to individuals to carry out these tasks (Ostrom, Pryor, & Simpson, 2022).

#### ***Acting***

Implementation is a directing management phase that consists of coordinating, controlling, and stimulating all elements so that they function optimally, while further, implementation is an effort to motivate organizational personnel to try to achieve goals. From that organization (Werdhani, 2017).

#### ***Evaluating***

Supervision has a very important role or position in management, considering that it has the function of testing whether work implementation is orderly, directed, or not (Herliana, Kristiawan, & Wardiah, 2023). Thus, control has the function of supervising all activities so that they are directed towards their targets, so that the goals that have been set can be achieved. Supervision is the process of monitoring, assessing, and reporting plans or achieving predetermined goals so that corrective actions are taken for further improvement (Saihu, 2019). Control in guidance and counseling management is called evaluation or supervision.

### **Performance of Administrative Staff**

Performance in an administrative context is a measure of how effective and efficient an administrative staff is in carrying out their duties and responsibilities (Almatrooshi, Singh, & Farouk, 2016). Performance includes work quality, work

quantity, timeliness, and commitment to tasks. In further, performance is the result of work that can be achieved by a person or group of people in an organization in accordance with their respective authority and responsibilities to achieve organizational goals legally, without breaking the law, and in accordance with morals and ethics (Maryani, Entang, & Tukiran, 2021). In the context of educational administration staff, performance includes how administrative employees carry out their duties and responsibilities in supporting the educational process in madrasahs.

### **Factors That Influence the Performance of Administrative Staff**

The performance of administrative personnel can be measured based on the achievement of goals, efficiency, effectiveness, quality of work, and their contribution to the overall operations of the organization (Pambreni, Khatibi, Azam, & Tham, 2019). The following are several elements that can influence the performance of administrative staff:

1. Skills and knowledge: Administrative staff who have skills and knowledge appropriate to administrative tasks will be able to carry out their duties well. These skills include abilities in time management, data processing, communication, software use, and knowledge of administrative policies and procedures.
2. Efficiency and productivity: The performance of administrative personnel can be measured based on their efficiency and productivity in carrying out administrative tasks. Efficiency refers to the optimal use of resources, such as time, effort, and costs, to achieve desired results. Productivity reflects the extent to which administrative personnel can produce quality output within a certain period.
3. Organizational skills and task management: Administrative staff who have good organizational skills can organize their work effectively. These task management capabilities help in completing tasks on time and with a high level of accuracy.
4. Collaboration and communication: Administrative staff often work in teams or interact with various parties in the organization, both with fellow team members and related parties, which can influence their performance.
5. Adaptability and problem-solving: The administrative work environment is often changing and complex. Administrative staff who can adapt quickly to change, overcome challenges and solve problems well will have better performance.

### **RESEARCH METHODOLOGY**

This research employs a qualitative approach. Qualitative research is a process aimed at understanding human or social problems by creating a comprehensive and complex picture, presented in words, which reports detailed perspectives obtained from information sources and is conducted in a natural setting (Aspers & Corte, 2019). This design is appropriate as it allows for an in-depth exploration of the experiences and perceptions of the participants. The research followed a systematic procedure where data were collected through three primary methods: interviews, observation, and documentation. The data collection was conducted in natural settings to ensure the authenticity of the information gathered. Triangulation was employed to verify the validity of the data, cross-checking information from various sources and methods to ensure consistency and accuracy. The research participants consisted of key stakeholders at MTsN 2 Bireuen, including 1 headmaster, 1 head of administrative affairs, 6

administrative employees, and 3 teachers. These participants were chosen for their roles in the management and implementation of administrative processes at the madrasah. Data collection was conducted through three primary techniques: (1) Interviews – semi-structured interviews were conducted with key participants to gather in-depth perspectives on the implementation of management information systems (MIS). (2) Observation – direct observations were made to understand the administrative processes and how MIS was integrated into daily activities. (3) Documentation - relevant documents related to MIS implementation and administrative practices were reviewed to gather supporting data. The data collected were analyzed using the interactive model of qualitative data analysis by Miles and Huberman (Ridder, Miles, Michael Huberman, & Saldaña, 2014). This process involves three main stages: (1) Data reduction – simplifying and focusing the data by selecting relevant information. (2) Data presentation – organizing and presenting the data in a meaningful way for interpretation, and (3) Conclusion drawing – identifying patterns, themes, and insights from the data. The analysis was iterative, allowing for continuous refinement of the findings.

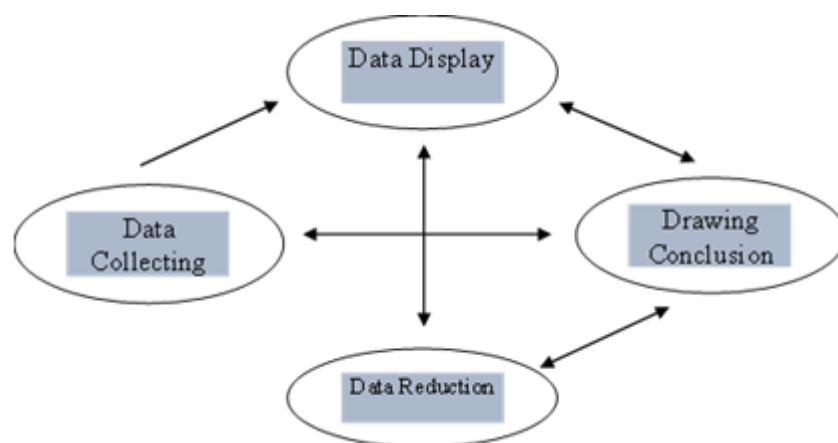


Figure 1. Data Analysis Scheme

## FINDINGS AND DISCUSSION

### Findings

The following is a presentation of research results related to planning, organizing, implementing (action), and evaluating (controlling) the management information system at MTsN 2 Bireuen.

#### 1. Planning

Based on data related to the planning aspect, the Management Information System (MIS) at MTsN 2 Bireuen, Bireuen Regency has been formed, and this is proven by the existence of a clear organizational structure based on each work assignment. The Headmaster of MTsN 2, in this case, stated:

"Regarding this implementation, I took a decision based on the consideration that developing and managing good information services is the key to smooth madrasa operations, as well as paying attention to the abilities and qualifications of the selected team members. Considering various regulations related to public information and electronic transactions, this decision determines the personnel

composition of the management team and their duties, which include preparing service materials, recording, documenting, and reporting regularly" (Interview with Headmaster of MTsN 2 Bireuen).

Something that was not much different was also conveyed by the head of administrative affairs regarding management information system planning at the madrasah, stating:

"I and the team of administrative staff at this madrasah understand the importance of planning in carrying out tasks to achieve common goals; based on that, the team and I have prepared a work plan as a guideline for the implementation of the management information system at MTsN 2 Bireuen to run optimally" (Interview with Headmaster of Administrative Affairs).

The results of interviews with madrasa heads regarding how to determine goals in managing this management information system are:

"In determining goals, we usually schedule a meeting with the madrasah and madrasah residents, even though the time is limited, in order to get appropriate goals and become a reference when determining the goals to be set" (Headmaster of MTsN 2 Bireuen).

The results of interviews with administrative staff regarding how to determine objectives in planning management information systems are:

"To formulate the management objectives of the management information system, we focus in accordance with the decree of the head of Madrasah Tsanawiyah Negeri 2 Bireuen, Bireuen Regency number 104 of 2021 concerning the formation of a management team for management information system services and in accordance with the SOP for the management information system so that it will be more focused and achieve maximum results." (Administration staff).

## **2. Organizing**

### ***Grouping Activities***

The objectives of a management information system (MIS) for educational purposes in madrasahs, important steps need to be taken to ensure that the management information system implemented can meet the needs and support the vision and mission of the madrasa itself. The success of the MIS program for future madrasa education purposes.

The results of an interview with the head of the madrasah regarding determining MIS for education stated that:

"Determining a management information system for educational purposes in madrasahs is so that the administrative process can MISplify and speed up all kinds of needs required by madrasahs" (Head of MTsN 2 Bireuen).

Furthermore, the results of the interview with the head of administrative affairs stated that:

"Our main goals are to increase administrative efficiency, provide accurate and timely information, improve the quality of education, ensure transparency and accountability, and strengthen data security. By achieving these goals, we hope to provide better educational services to students and support the duties of teachers and administrative staff" (Head of administrative affairs).

Based on the results of interviews with the head of administrative affairs regarding activity groupings:

"Grouping activities is very important because it helps in organizing tasks systematically so that each staff knows what to do and when to do it. It ensures that all aspects of data management can be carried out efficiently and effectively, as well as reducing duplication of work and the potential for errors" (Head of administrative affairs).

#### ***Granting Authority and Responsibility***

Based on the results of an interview with the head of MTsN 2 Bireuen, he stated that:

"Determining the responsibility and authority for organizing MIS in madrasas is to ensure that members of staff understand their respective roles" (Head of MTsN 2 Bireuen).

Furthermore, the head of Madrasah Tsanawiyah Negeri 2 Bireuen said:

"The process of distributing MIS duties at madrasas is based on the work experience of each staff because the administrative staff at MTsN 2 Bireuen do not have educational qualifications based on a bachelor's degree in information technology" (Head of MTsN 2 Bireuen).

#### ***Coordination Of Management Information Systems***

Based on the results of an interview with the headmaster of Madrasah Tsanawiyah Negeri 2 Bireuen, he stated that:

"Coordination of management information systems in madrasas is carried out by determining each member or staff to help each other complete their respective work" (Headmaster of MTsN 2 Bireuen).

Based on the results of the interview above, it can be analyzed that the coordination of the management information system that is already running in the madrasah is carried out by helping each other complete the work so that it does not become an obstacle or obstacle in the development and progress of administrative staff at MTsN 2 Bireuen, Bireuen Regency.

#### ***Preparation Of Organizational Structure***

Based on the results of interviews with madrasa heads regarding the preparation of organizational structures, it was stated that:

"The organizational structure really needs to be structured in such a way, of course, based on the resources available at this madrasa. We consider the preparation of this structure to be important because it is a benchmark for administrative staff in carrying out their performance in accordance with their respective SOPs and main duties. "This is also my third consideration in developing the structure of this madrasa and also the structure of the administrative staff in particular" (Headmaster of MTsN 2 Bireuen).

Then, the researchers dug deeper into the results of preparing the organizational structure and found the answer:

"The results are very positive. With a clear organizational structure, we can manage data and information more efficiently. Well-defined duties and responsibilities help staff work more effectively, reduce errors, and increase data accuracy. "Apart from that, the decision-making process becomes faster because the information needed is available on time and is easily accessible" (Headmaster of MTsN 2 Bireuen).

### **3. Implementing**

The research results related to aspects of implementing management information systems at MTsN 2 Bireuen are as follows:



### ***Communication***

Based on the results of interviews with the head of administrative affairs related to communications, it was stated that:

"Communication plays a very important role in the implementation of MIS. With effective communication, all staff can understand their duties and responsibilities so that the data management process runs smoothly. Apart from that, good communication also helps in coordination between ministries and in resolving problems that arise" (Head of administrative affairs).

Furthermore, the researcher asked in-depth questions regarding what communication channels were used in implementing MIS at MTsN 2 Bireuen, and he said:

"We use a variety of communication channels, including regular meetings, email, instant messaging applications, and bulletin boards. Regular meetings are held to discuss developments and challenges faced in MIS management. Email and instant messaging applications are used for daily communication and quick delivery of important information. Notice boards are used to inform new policies and procedures" (Head of administrative affairs).

### ***Motivation***

The results of the interview with the madrasa head regarding the role of the madrasa head in motivating staff and teachers to use MIS and he stated that:

"As the head of a madrasa, I always try to provide a clear understanding of the importance of MIS for improving the quality of education in madrasas. I often hold meetings and discussions to explain the benefits and objectives of using a MIS. I also try to be an example in using this system effectively" (Head of MTsN 2 Bireuen).

The same thing was also conveyed by administrative staff regarding the motivation given by the madrasa head:

"The madrasa head always supports us and provides solutions if there are problems. It makes us feel appreciated and motivated to maximize the use of MIS in our daily work. The madrasa head also gave us the opportunity to take part in regular training, and open communication made us feel more prepared and motivated to use MIS. The awards given also really motivate us to work better" (Administrative staff).

### ***Leadership And Giving Orders***

It is confirmed by a review of the documentation provided by the head of administration that the madrasa head's leadership and giving orders are very detailed and pay attention to all needs, and this can be seen in the following table:

Table 1. Management Information System facilities and officers at MTsN 2 Bireuen

No	Media Link	Officer	Tool	Information
1.	Website MTsN 2 Bireuen	Zikry, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021

2.	E-Mail, Facebook, Instagram, Youtube	Zikry, S. Pd, Masdiana, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021
3.	MISPATIKA, GPP, EKINERJA, SAKTI, MONSAKTI, OMSPAN	Ansari Hasan Hasan, S.Pd. MA, Nurmawati, S. Pd, Herizal, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021
4.	EMIS, ARD	Hayatunnufus, A. Md	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021
5.	PUSAKA, Fingerprint	Herizal, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021
6.	SIBAY	Masdiana, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021
7.	SIKMA	Maidar, S. Pd	Laptop, Computer, Internet	Decree regarding management of MIS no. 113 of 2021

### ***Development Of Service Administration Staff***

The results of interviews with madrasa heads related to the development of administrative staff in the implementation of management information systems stated that:

"Developing administrative staff is very important in implementing MIS in madrasas. Without skilled and competent administrative staff, the information system we have will not run effectively. They are the operational backbone of this system, ensuring data is managed correctly and processes run smoothly" (Head of MTsN 2 Bireuen).

Next, the researcher asked about the steps and strategies taken by the head of the madrasah, who stated that:

"Madrasah principals have taken various steps to ensure administrative staff has the necessary skills through regular training, workshops, guidance, and performance evaluations. Despite facing several challenges such as budget limitations and resistance to change, various strategies have been implemented to overcome these obstacles" (Head of MTsN 2 Bireuen).

### ***Alignment Of Service Goals***

The results of an interview with the head of the madrasa regarding good goal alignment and he stated that:

"Alignment of goals is very important because it ensures that all elements of the madrasa are working in the same direction. With aligned goals, each part of the organization knows its role and how its contribution supports the overall goal. This creates synergy and reduces the potential for conflict or duplication of work" (Head of MTsN 2 Bireuen).

The same thing was also conveyed by administrative staff regarding goal alignment, who said that:

"I followed several processes explained and directed by the head of the madrasah regarding the common understanding of the goals that will be achieved together through the use of the management information system at MTsN 2 Bireuen" (Administrative staff).

Next, the researcher asked the teacher regarding the alignment of goals, who said that:

"I have also attended meetings and socialization related to the implementation of information systems where in achieving common goals collaboration and good understanding are very necessary, so that this madrasa can achieve maximum goals as expected" (Teacher).

#### **4. Evaluating**

##### ***Performance Measurement***

The results of interviews with supervisors regarding work measurements stated that:

"As a supervisor, my role is to ensure that MIS runs according to established standards and supports the achievement of educational goals. I carry out an assessment of the implementation of MIS and provide recommendations for improvement" (MTsN 2 Bireuen Supervisor).

##### ***Comparison Between Actual Performance and Standards***

The results of interviews with administrative staff regarding comparisons stated that:

"In general, the current MIS performance is quite good when compared to the standards that have been set. We have standards for data access speed, data accuracy, and ease of use. In some respects, such as access speed and data accuracy, we have reached the expected standards. However, there are several areas that still need improvement, especially in terms of ease of use for new users" (Administrative staff).

Next, the researcher asked the teacher how the teacher assesses the performance of MIS in supporting your duties as a teacher compared to the standards that have been set, and he said that:

"MIS's performance in supporting my duties as a teacher is quite good. The standards set include fast access to student data, ease of inputting grades, and the ability to generate academic reports. This system helps me save time in data processing and allows me to focus more on teaching. However, sometimes I experience technical problems that take time to fix" (Teacher).

##### ***Corrective Action***

Based on the results of interviews with madrasa heads regarding the main findings from the MIS evaluation at MTsN 2 Bireuen, which require corrective action states that:

"The main findings from the MIS evaluation at MTsN 2 Bireuen that require corrective action include data inaccuracies (there are several data input errors that need to be corrected, (data access delays: several times the system experienced delays in data access), lack of features that users need (users want additional features that are not yet available in MIS), limitations in operational efficiency: there are still several processes that can be automated to increase efficiency) as well as system reliability issues: there are several downtime incidents that need to be overcome" (Headmaster of MTsN 2 Bireuen).

### ***Feedback***

Based on the results of interviews with teachers regarding feedback which stated that:

"We are asked to provide feedback on MIS at least twice a year through user satisfaction surveys. Apart from that, we can also provide input at any time via the suggestion box or directly to the head of administrative affairs during teacher meetings" (Teacher).

The researcher confirmed with the head of administrative affairs how to collect feedback on the implementation of the management information system at MTsN 2 Bireuen and stated that:

"The process of collecting feedback is carried out in several ways: user satisfaction surveys (periodically, we distribute questionnaires to teachers, staff, and students to collect feedback on MIS performance), suggestion boxes: we also provide suggestion boxes at several locations in the madrasah to make it easier users provide feedback anonymously), evaluation meetings: hold regular evaluation meetings with the MIS team and user representatives to discuss problems and find solutions, and individual interviews: conduct individual interviews with key users to gain a deeper understanding of their experiences with the MIS" (Head of administrative affairs).

### ***Process Improvements***

Based on the results of interviews with the head of administrative affairs regarding the main objective of improving the process of evaluating MISs in madrasahs, it was stated that:

"The main goal is to improve operational efficiency, ensure data accuracy and integrity, and increase user satisfaction. By improving the process, we hope to minimize errors and optimize MIS performance" (Head of Administrative Affairs).

The researcher asked further questions regarding what steps were taken to perfect the MIS process and stated that:

"Steps taken include improving operational procedures (drafting and updating standard operating procedures (SOP) to ensure data consistency and quality), improving training (organizing further training for staff to improve their skills in using MIS), implementing new technology (adopting new technology that is more efficient and effective for data management) as well as regular monitoring and evaluation: carrying out regular monitoring and evaluation to ensure that improvements made bring the expected results)". (Head of administrative affairs).

### ***Discussion***

The MIS at MTsN 2 Bireuen has been running well, according to the data obtained. In the context of planning, MTsN 2 Bireuen has implemented management functions well, and this is proven by the existence of assessments, determining objectives, planning

premises, identifying alternatives, evaluating alternatives, and selecting alternatives. Decree of the head of MTsN Bireuen 2 Number 104 2021 concerning the formation of a management and documentation information system service management. The management process carried out by MTsN 2 Bireuen is in accordance with the concept and is contained in a document called "Education implementation development plan for 2021 to 2024 MTsN 2 Bireuen", or in another sentence is a strategic plan (Renstra). Furthermore, the implementation of MIS at MTsN 2 Bireuen helps in making more precise and data-based decisions. With accurate and real-time data, management can analyze various information better, make more precise predictions, and plan more effective actions.

Overall, the implementation of MIS at MTsN 2 Bireuen is a very important strategic step to improve administrative efficiency and the performance of administrative staff, as well as supporting the achievement of higher education goals. The implementation of educational management information systems in the learning process, including planning, organizing, leading, and controlling, is needed for the success of activities in organizations, including in the field of education (Turnbull, Chugh, & Luck, 2020). Success in carrying out these management functions is supported by an information system that is able to provide the information needed by leaders of the institution (Dwivedi et al., 2015). The planning aspect of the management information system at MTsN 2 Bireuen has been running well, and this is proven by the existence of assessments, determining objectives, planning premises, identifying alternatives, evaluating alternatives, and selecting alternatives.

In the context of organizing MIS, MTsN 2 Bireuen has been running well, and this is proven by determining objectives and activities, grouping activities, assigning tasks, assigning authority and responsibility, coordinating, and preparing the organizational structure (Burton & Obel, 2018). Furthermore, the organizing aspect of the Management Information System (MIS) at MTsN 2 Bireuen has been running well, and this is proven by the determination of objectives and activities, grouping of activities, assignment of tasks, granting authority and responsibility, coordination, and preparation of organizational structure. In organizing the school, there are several types of operators according to their field of expertise, such as operators for Dapodik, operators for listening, and operators for e-reports (Parsons, 2017).

In principle, organizing management information systems in madrasahs is all kinds of processes that involve planning, implementation and maintenance of systems that manage information effectively (Suharno & Imraan, 2024). Good organizations can improve work results that are more efficient and effective (Podsakoff & MacKenzie, 2014). Therefore, an organization will function well if the organizing process is carried out well in accordance with the provisions and expertise (Elmore, 2014).

In the implementation process, the role of the headmaster in implementing the Management Information System (MIS) is very important and strategic (Shah, 2014). The madrasah headmaster has the main responsibility of leading and supporting the entire MIS implementation process (Nasution, Miranda, & Zulaikha, 2021). First, the madrasah head is responsible for formulating the vision, mission, and objectives of MIS implementation, as well as communicating the importance of using MIS to all staff and members of the

madrassa community. In addition, madrasa heads must also ensure the availability of human resources, finance, and technological infrastructure necessary for the successful implementation of MIS (Martani, 2023). Based on the analysis above, it is concluded that the management information system implementation (action) aspect at MTsN 2 Bireuen has implemented management information systems, especially in the implementation section, by carrying out several things, including communication skills, motivation, leadership, giving orders, developing people, and aligning goals. the good one.

In the MIS evaluation process at MTsN 2 Bireuen, it was revealed that some teachers faced challenges or obstacles in using the Management Information System (MIS) in madrasas. However, on the other hand, most of them also stated that they were able to overcome these challenges. Evaluation of management information systems is a continuous activity as a cycle that does not stop until data/information is collected. The implementation of a management information system has positive and negative impacts, which will be used as material for future evaluation so that the implementation of the education management information system can be maximized. Based on the analysis above, it can be concluded that the evaluation (controlling) of the management information system at MTsN 2 Bireuen has been carried out well, and the existence of activities such as performance measurement, comparison between actual performance and standards, corrective action, feedback, and process improvement proves this. The researcher further describes the management of the management information system implementation at MTsN 2 Bireuen in the following figure:

The Implementation of Management Information System at MTsN 2 Bireuen			
Planning	Organizing	Acting	Evaluating
<ul style="list-style-type: none"> <li>Assessment</li> <li>Goal Setting</li> <li>Planning</li> <li>Premise</li> <li>Identify alternatives</li> <li>Alternatives evaluation</li> <li>Alternative selection</li> </ul>	<ul style="list-style-type: none"> <li>Determination of goals and activities</li> <li>Grouping of activities</li> <li>Task assignment</li> <li>Assignment of authority and responsibility</li> <li>Coordination</li> <li>Preparation of organizational structure</li> </ul>	<ul style="list-style-type: none"> <li>Communication and motivation skills</li> <li>Leadership</li> <li>Command assignment</li> <li>Personnel development</li> <li>Goal Alignment</li> </ul>	<ul style="list-style-type: none"> <li>Performance measurement</li> <li>Comparison between actual performance and standards</li> <li>Corrective action</li> <li>Feedback</li> <li>Process Improvement</li> </ul>

Figure 2. Implementasi sistem informasi manajemen di MTsN 2 Bireuen

In general, the implementation of Management Information Systems (MIS) in educational environments is often faced with various challenges that need to be overcome to achieve success (Setyowati, Widayanti, & Supriyanti, 2021). One of the main challenges is the readiness of teaching staff and administrative staff to adapt to new information technology (Alfalah, 2018). Often, they require intensive training to understand and use the system effectively. Lack of understanding of MIS features or inability to utilize them optimally can be a major obstacle. In addition, technical problems such as limited IT infrastructure, slow internet connections, or inadequate hardware can also hinder MIS implementation (Nyambaga, 2016).

Apart from that, changes in culture and work habits are also often a challenge. The use of MIS requires changes in work processes that have been established for many years, and this may encounter resistance or discomfort from some staff members. Therefore, effective communication and a deep understanding of the benefits of using MIS are needed to convince all parties of the need for change.

Challenges encountered in implementing management information systems include the readiness of teaching staff and administrative staff to adapt to new information technology, technical problems (limited IT infrastructure, slow internet connection, or inadequate hardware), changes in culture and work habits, and security issues. Data and privacy, as well as the continued use of the MIS, are also important considerations (including long-term budget planning for ongoing equipment maintenance, updates, and training) (Bumblauskas, Gemmill, Igou, & Anzengruber, 2017).

The solutions taken to face the challenges of implementing the management information system are effective communication and a deep understanding of the benefits of using MIS, holding various training and workshops for administrative staff regarding the use of MIS, a systematic approach and targeted training and collaborating with other people., either with fellow TU staff or by asking for help from superiors.

## CONCLUSION

Based on the research results, findings, and discussions, it can be concluded that: 1) The planning aspect of the management information system at MTsN 2 Bireuen, Bireuen Regency has been well implemented, as evidenced by the existence of assessments, goal setting, planning premises, alternative identification, alternative evaluation, and alternative selection. 2) The organizing aspect of the management information system at MTsN 2 Bireuen, Bireuen Regency, has been well executed, as evidenced by setting objectives and activities, grouping activities, task assignments, delegation of authority and responsibility, coordination, and organizational structure preparation. 3) The implementation aspect (actuation) of the management information system at MTsN 2 Bireuen, Bireuen Regency, has been carried out effectively, particularly in areas such as communication skills, motivation, leadership, order giving, people development, and goal alignment. 4) The evaluation (controlling) of the management information system at MTsN 2 Bireuen, Bireuen Regency, has been conducted successfully, as evidenced by performance measurement activities, comparison between actual performance and standards, corrective actions, feedback, and process improvements.

However, this study has several limitations. First, the research was conducted at only one madrasah (MTsN 2 Bireuen), which may limit the generalizability of the results to other educational institutions. Second, the study relied on qualitative methods such as interviews and observations, which are subjective in nature and may be influenced by the perceptions of the participants. Furthermore, the research primarily focused on the administrative aspects of the management information system without considering its impact on teaching and learning processes, which would provide a more holistic understanding of its role within the educational context.

As for future research implications, it is suggested that further studies explore the application of management information systems across a wider range of educational

institutions to enable comparisons and identify universal best practices. Future research could also extend the focus to investigate the impact of MIS on overall educational outcomes, including teaching effectiveness and student performance. Additionally, future studies could integrate quantitative methods to provide more objective measures of MIS performance and its effects on administrative efficiency and educational quality. Lastly, it is important to explore the role of continuous professional development for staff in adapting to digital tools and systems, as this could provide valuable insights to enhance the long-term success of MIS implementation in education.

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