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ANALYSIS OF PRINCIPAL ABILITY IN MANAGEMENT INFORMATION SYSTEM AT SMA NEGERI 1 KABILA

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Abstract

This study aims to analyse the principal's ability to manage the Management Information System (SIM) at SMA Negeri 1 Kabila. The focus of the research includes the principal's understanding of the concept of SIM, the implementation of SIM in managerial functions (planning, implementation, supervision, and evaluation), and the obstacles faced in its management. The research method used a qualitative approach with data collection techniques in the form of in-depth interviews, observation, and documentation. The results showed that principals have a fairly good understanding of SIM and have implemented it through various platforms such as Dapodik and E-Raport. However, there are a number of challenges such as limited technological infrastructure, low digital literacy of educators, and lack of formal training. This study concludes that despite the positive initiatives of school principals in managing SIM, competency improvement and systemic support are still needed to realize effective and sustainable data-driven school management.

Keywords: *information system, management, educational leadership, digital transformation, education*

Introduction

The rapid development of information technology requires the world of education to transform school governance and management. One of the important instruments in supporting the efficiency and effectiveness of school management is the Management Information System (MIS). This system covers various processes such as planning, decision-making, monitoring, and reporting, all of which depend on the availability of accurate and real-time data. The school principal as the highest leader in the education unit has a strategic role in the implementation and utilization of this management information system.

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In the context of educational transformation in the digital era, the role of school principals has shifted significantly. No longer merely an educational administrator, principals are now required to be visionary and adaptive digital change agents. This is especially important in the utilization of the Education Management Information System (SIMP) which is designed to support the effectiveness of decision-making, academic data management, financial reporting, and school administration governance in an integrated and real-time manner (Musfirah & Mardhiah, 2024).

SIMP has become the backbone of education information management because of its ability to provide fast, accurate and relevant data for managerial needs. However, the effectiveness of this system implementation is highly dependent on digital literacy and the capacity of school principals to manage and utilize the technology optimally. In many cases, limitations in the aspect of information technology competence are still a major obstacle (Ritonga, 2025).

Ideally, SIMP should function as an analytical instrument that helps principals systematically identify educational problems and make evidence-based decision making. In reality, many principals still do not have a deep understanding of the strategic features of the SIMP and only use it as a formal reporting system. As a result, decision-making tends to be intuitive and not based on comprehensive data.

The gap between the top-down education digitization policy and the readiness of human resources at the school level is an urgent issue to be researched. The government through the Ministry of Education, Culture, Research and Technology has rolled out various programs such as Sekolah Penggerak to encourage digital transformation in schools, but the effectiveness of its implementation has not been evenly distributed in all regions (Khoirurrozikin, 2024).

Previous research by Dede Fuad (2024) emphasized that principals' understanding of the main functions of SIMP is a key determinant of successful implementation. Schools whose leaders understand the importance of SIMP as a strategic tool tend to have better quality education management. Meanwhile, Mawaddah (2024) showed that principals' digital competencies were directly proportional to the effectiveness of

BOS reporting, teacher performance management, and learning evaluation.

Furthermore, a study by Najah (2025) conducted at SD Muhammadiyah Surabaya highlighted that principals who actively utilize technology in digital curriculum management are able to improve 21st century competencies in learners. This shows that the impact of SIMP implementation does not only stop at internal administration, but also touches the quality dimension of student learning.

Unfortunately, until now there have not been many studies that comprehensively and deeply explore how principals understand, access, and interpret the use of SIMP in the context of daily life at school. Social, cultural, psychological, and personal leadership factors have not been studied in a qualitative approach that explores the user's perspective holistically.

This phenomenon is an important basis for conducting a qualitative study that focuses on the subjective experience of school principals in using SIMP. The qualitative approach is believed to capture the dynamics of perceptions, motivations, barriers, and values that shape the practice of SIMP use by school principals in different contexts. Thus, a deeper understanding of the form of digital managerial competence that is not only technical, but also strategic and contextual will emerge.

The study also aims to identify best practices from principals who have managed SIMP effectively and adaptively. This knowledge can be used as a basis for the development of principal training policies, professional mentoring systems and the redesign of the SIMP system to better suit the needs and realities of Indonesian schools.

Furthermore, this research is relevant within the framework of improving the quality of national education, especially in terms of transparency, accountability and technology-based innovation. School principals as data-driven learning leaders play a key role in addressing the challenges of education quality in the current era of technological disruption and globalization demands (Adzkia et al., 2025).

Recent literature and studies show that the challenges in implementing SIMP vary widely, especially when viewed against the geographical setting and socioeconomic conditions of schools. In remote areas, many schools face digital infrastructure

constraints, lack of access to ICT training, and lack of ongoing technical assistance (Hartini & Noorhafizah, 2025). This has resulted in SIMP being utilized only in a limited way, limited to administrative functions, rather than as a strategic tool in data-based decision-making.

The principal is a central actor in realizing professional, adaptive and data-driven education governance. The principal's role is not only as an administrative manager, but also as a transformational leader responsible for utilizing information technology, including Management Information Systems (MIS). In this context, the principal's ability to manage SIM is an important indicator in determining the quality of education services and the efficiency of decision-making. However, the dynamics that occur in the field show that not all school principals have sufficient competence in running SIM optimally.

A phenomenon often found in schools in the regions, including Gorontalo, is the low level of digital literacy among school leaders. This results in slow data processing, late reports, and less than optimal analysis of academic and non-academic performance. In this case, school principals are faced with the challenge of transforming conventional management towards the digitalization of the education system. The gap between technology-based policies and human resource capacity is a crucial issue that affects the success of SIM implementation in schools.

Changes in national policies through the Merdeka Belajar program and the digitalization of education reinforce the importance of transforming information systems in schools. The government through the Ministry of Education and Culture has provided various platforms such as Dapodik, Rapor Pendidikan and e-RKAS. However, the implementation of these systems relies heavily on the leadership of school principals in building a data- and technology-based work culture. If school principals do not have adequate technical and managerial skills in SIM, it will be difficult to implement various national programs effectively.

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The gap in the research is seen in the lack of in-depth exploration of principals' experiences, perceptions and strategies in implementing SIM holistically. A qualitative approach is important to explore complex social realities, uncover structural and cultural barriers, and understand how principals interpret their roles in the context of information technology.

SMA Negeri 1 Kabila as one of the leading schools in Bone Bolango Regency, Gorontalo, is interesting to analyze. With various excellent programs and relatively adequate educational infrastructure support, the effectiveness of the use of management information systems by school principals is an important indicator in achieving managerial and academic targets. However, there is no in-depth study that reveals how the principal's ability to operate, understand, and lead the use of SIM in the school environment.

However, various studies and observations show that there are still challenges in implementing SIM at the senior secondary school level, especially in the regions. This is where the importance of knowing the extent to which school principals are able to manage and utilize management information systems, both in terms of technical competence, understanding of concepts, and data-based decision-making. This ability will have a direct impact on the quality of school governance and the achievement of the institution's vision and mission.

This study aims to deeply analyze the principal's ability to manage the Management Information System at SMA Negeri 1 Kabila. The main focus lies on the aspects of data-based planning, implementation, supervision, and evaluation. This research will qualitatively explore how principals interpret the use of SIM, the obstacles faced, and the efforts made to improve their performance in managing educational information.

Literature Review

Management Information System (MIS)

Management information systems are part of the internal control of a business that includes the utilization of human resources, documents, technology, and procedures by management to solve business problems. A management information system, as it

is commonly known, is a human/machine system that is integrated (integrated) to present information to support operations, management, and decision-making functions in an organization. This system uses computer hardware and software, procedural guidelines, management and decision models, and a “data base”.

Susanto (2004) states that a management information system is a collection of sub-systems that are related to each other and work together harmoniously to achieve the goal of processing data into information needed by management in the decision-making process when carrying out its functions. Management information systems can be distinguished from ordinary information systems because they are used to analyze other information systems applied to an organization's operational activities. Academically, the term is generally used to refer to a group of information management methods related to automation or support for decision-making, such as decision support systems, expert systems, and executive information systems.

Meanwhile, according to (Yulianti & Gistituati, 2024) that management information system is an integrated system of humans and machines to present master information to support the functions of operations, management, and decision-making composition in an organisation. A management information system is information that is used to carry out various transactions required by an organisation. It also provides access to transaction data to manage people and achieve goals. According to Komarudin, a management information system is an information system that allows organisational leaders to obtain information of the right quantity and quality for use in decision-making composition.

According to (Riswanda & Priandika, 2021) a management information system is a computer-based system that provides information for the needs of its users. Meanwhile, according to James A.F. Stoner, an information system is a formal method that provides management with timely, reliable information to support the composition of decision-making for more effective planning, supervision, and operational functions of an organisation. A Management Information System (MIS) is a collection of various interrelated components to collect, store, and manage data required for decision-making and management of an organization. In this context, the

importance of SIM in improving the company's operational efficiency is undeniable, as SIM supports better decision-making. As stated in a study by Dewi and Puspitasari, SIM can be the basis for decision making for both internal and external parties (Dewi & Puspitasari, 2023).

Siregar et al. explained that SIM is designed to support managerial activities, assist companies in improving operational efficiency, and introduce business innovation (Siregar et al., 2023). With the right system, organizations can access strategic information needed to compete in an increasingly dynamic market. In this article, the use of the CodeIgniter framework to develop the system shows how technology can be integrated with management to improve organizational performance.

Technical skills in the use of databases and information technology also become very important in information management. Silviah et al. emphasized that lack of accuracy, detail, and relevance in information can result in failure in decision making (Silviah et al., 2022). Thus, a deeper understanding of the components of SIM, such as information technology, brainware (human resources), and database, is crucial to produce quality information. This reflects how complex the role of information is in supporting the success of an organization.

In a more specific context, SIM is not only limited to the business sector, but is also very relevant in the field of education. Aisyah et al. emphasized that Educational SIM helps in processing relevant transactions and supporting managerial functions in schools (Aisyah et al., 2023). Here, SIM is used as much as possible in supporting the learning and administrative processes in schools, especially in improving the quality of education and student data management.

However, SIM implementation and development are not without challenges. Pratama et al. discuss constraints in system application related to data management and staff training, which can affect system effectiveness in human service organizations (Pratama et al., 2022). Therefore, to ensure that the benefits of information systems are realized, it is important to overcome these constraints through adequate training and human capacity building.

Furthermore, the study also highlighted the importance of risk management related to information system security. Saputra et al. indicated that the phenomenon of information technology development is inseparable from increasing security challenges (Saputra et al., 2023). Preventive measures against such threats, including intrusions and eavesdropping, need to be integrated in SIM planning and management. This shows how important cybersecurity is in ensuring the continuity of organizational operations.

Each organization has unique needs, which directly influence the design and implementation of SIM. Putri and Bobby illustrate this through their study of SIM in construction projects, which implies that efficient data management is essential to facilitate information processing and decision-making in projects (Putri & Bobby, 2020). Thus, the ability to customize the system to specific needs is a key element in the success of SIM.

Lessons learned from various case studies provide insights into how SIM can be optimized. Putri and Ganggi argue that health information management amid the pandemic provides valuable lessons on how information can be managed effectively to respond to the needs of the public (Putri & Ganggi, 2022). This suggests that in emergency situations, the ability to manage information efficiently can contribute to public safety and comfort.

In education, the application of SIM is also observed in learning institutions that seek to improve the quality of education. Research by Zamroni shows that the implementation of educational SIM contributes to a more efficient and organized learning process (Zamroni, 2020). The existence of adequate technology facilities and training for educational staff are key factors in achieving optimal results.

In terms of developing technology-based management information systems, there are technical and human resource challenges. Zamroni identified obstacles in the implementation of optimal information systems, both from technical factors and human resource weaknesses that require further attention (Setyowati & Nugroho, 2020). Planned efforts are needed to overcome these challenges so that the benefits of

SIM can be maximized.

On the other hand, the use of SIM in the SME sector has also been proven to bring positive results. Rupbianti et al. explained that the use of SIM can improve the quality of financial reports in MSMEs by making the data processing process more structured and accurate (Rupbianti et al., 2022). This emphasizes that technology can serve as an important catalyst in improving financial transparency and accountability among SMEs.

The interrelationship between various SIM components in the support of managerial processes has been discussed in depth in commentaries by various researchers. One important discourse was presented by Hermawan et al. who conducted a systematic review of project management in the context of SIM, explaining how project success is strongly influenced by good management practices (Hermawan et al., 2023). This suggests that attention to project management methodologies can have a major impact on the success of SIM implementation.

As technology advances, new challenges and opportunities arise in the development of SIM. The benefits of using this system depend on effective design and the organization's ability to adapt the system to the demands and changes occurring in the external environment (Sonia, 2020). Therefore, a comprehensive strategic approach in the development of information systems is very important in ensuring optimal utilization.

Overall, SIM is proven to serve as a multifaceted strategic tool, which not only helps in data and information management but also influences decision-making, innovation, and organizational growth. Whether in the commercial, education, or public service sectors, SIM plays a vital role in facilitating operations and achieving strategic goals. Through the use of technology and effective management, organizations can continuously adapt and improve their performance to achieve success in their respective fields.

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Reflection on the SIM implementation experience shows that collaboration between technology, process, and people is key in achieving the organization's vision and mission. This leads us to continue exploring the potential of improving management information systems through various innovations and adaptations to respond to the dynamics of a changing world.

From the various theories above, the author can conclude that Management Information System (SIM) is an integrated system of people, machines, technology, and procedures designed to support operational, managerial, and decision-making functions in an organization. SIM is not only relevant in the business sector, but also plays a strategic role in the world of education, health, public services, and MSMEs. Various studies have shown that proper implementation of SIM can improve efficiency, transparency, accountability, and organizational adaptability to changes in the external environment.

However, SIM implementation faces various challenges, such as technical limitations, lack of competent human resources, and information security risks. Therefore, the SIM development strategy should include training, risk planning, and customization to the specific needs of the organization. With a systematic and integrated approach, SIM is able to make a real contribution to the achievement of the organization's strategic goals.

The use of information technology systems in education has been commonly used in schools. Although the form of using information management systems has also begun to be used in schools ranging from simple to complex, the information management system currently best known by school managers is the database from the government that is filled in every time for the benefit of educational data collection such as Dapodik and Padamu Negeri. Information processed using computers can be used by an organizational leader or an individual with expertise as a means of communication and problem solving, as well as very valuable information in the decision-making process. Information can be extracted through available sources, such as human resources, materials, tools, costs required, and data to be processed.

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Information is also one that is considered in the world of education. information that is processed in the world of education in the form of an information system. Since a school was founded, the education management information system has also been running in it. But its role has not been felt in improving school quality. There is a long-running trend where the parameters used for competitive advantage are the management of physical resources. But now the paradigm has changed along with the development of science that information can be an advantage in competing (Azrafiandi & Agustin, 2023).

From the description above, it can be concluded that a management information system is a system designed to provide information to support decision making in management activities (planning, mobilizing, organizing, and controlling) in organizations.

Various elements of management information systems can collaborate in an opportunity that provides information using the correct and timely design based on the expression (Sirojuddin et al., 2022). The information system has several components consisting of:

1. Humans, can stand for other elements in the system such as hardware, software, operating procedures and so on.
2. Procedures, used to provide instructions on how humans should run information systems. This procedure is also used by humans to operate hardware through the software they have.
3. Hardware, is physical equipment in the form of a computer. Computers run using a binary number system. In this digital era, the form of computers has varied according to the needs of running management.
4. Software, is the term used for instructions that a hardware has. These instructions are also called programs. Software consists of an operating system and application programs. Software provides commands to run hardware.

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5. Data, is a term that refers to the facts of a particular topic. Data can be turned into valuable information, And it can be in the form of recordings, documents, note sheets. According to Davis, there are 2 types of frameworks according to their design, namely close frameworks and open frameworks.

The purpose of building information in the form of an education information system application is: 1) Helping all parts that play a role in the world of education by providing comprehensive information about education from elementary school level to general high school or its equivalent. 2) Provide a means for all parts that play a role in the world of education in the province / district / city to be able to play an active role in efforts to advance the education business. 3) Public accountability by providing transparent information about policies and the use of resources allocated to education. 4) Improving teachers' and students' knowledge of informatics and its benefits through training. 5) Providing easy and complete access to information for educators and students regarding science and other educational information (Loilatu et al., 2020).

Principal Leadership

Experts differ in their opinions in interpreting the nature of the word “leadership”. The differences in definitions put forward by experts are of course based on the point of view of the expertise and knowledge possessed by these experts. Susan Ward as cited by (Sarjito, 2019) describes the term leadership as an art of a leader in motivating a group of people he leads to jointly take action in accordance with applicable rules in order to achieve the set goals. Leadership is often also interpreted as a process by which individuals can influence their group members in achieving a goal, either group or organizational goals. (Greenberg & Baron, 1997) define leadership as a leader's ability to influence others with an impact to encourage and enable them to contribute to the effectiveness and success of an organization.

The principal is one of the most instrumental components in improving the quality of education, as stated in Government Regulation (PP) Number 28 of 1990 article 12 paragraph 1 that "The principal is responsible for the organization of educational

activities, school administration, coaching other education personnel and utilization and maintenance of facilities and infrastructure.

The Principal's leadership function as a determinant of direction means that leaders must be able to determine programs, explore ideas, and make decisions that can be used as guidelines by subordinates. The decision is the direction that will be achieved by each individual in the organization. If the leader's decision does not exist, then the subordinates will lose orientation which in turn can destroy the existence of the leadership.

The success of education in Indonesia, both in terms of teacher and student achievement, is strongly influenced by the effectiveness of principal leadership. Principals have a role that is not only limited to administrative management, but also as learning leaders who are responsible for developing teachers' professional capacity. Studies show that there is a positive correlation between principal leadership and improved teacher performance, which in turn encourages the achievement of educational goals, especially at the high school level. Research conducted by (Farida et al., 2022) found that academic supervision as well as the principal's leadership style had a real impact on the quality of teaching at SMA Negeri 2 Kayuagung.

Furthermore, principal leadership contributes to building teachers' confidence through various professional development programs. According to (Gümüş & Bellibaş, 2020). these development activities provide space for principals to improve their leadership quality. High self-efficacy allows principals to implement effective leadership strategies, which in turn has a direct impact on improving teacher performance and student learning outcomes.

Further studies show that principals' leadership styles influence teachers' motivation and professionalism. Findings from (Nelianti et al., 2021). revealed that there is a significant relationship between principal leadership, school work culture, and the level of teacher professionalism, with a contribution that reaches 80%. This indicates that a positive work environment, created through supportive leadership, can increase teacher enthusiasm and dedication. In line with that, (Dian et al., 2021) showed that a

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supportive leadership style was significantly able to encourage improved teacher performance.

Recent developments in the field of educational leadership have also highlighted the role of transformational leadership applied by school principals. (Yuda et al., 2023) explained that this approach encourages collaboration among teachers and contributes to improved student achievement. Leadership that has a vision and is able to inspire is believed to be the main driver of positive change in the school environment.

In a broader perspective, school management effectiveness is one of the crucial factors that influence student learning outcomes. Gümüş and Bellibaş (2020) assert that the quality of management has a greater influence on educational achievement than the mere availability of physical resources. Leadership styles, both participative and authoritarian, have a direct effect on teacher performance as well as student learning outcomes (Rahman, 2022). Principals also have a responsibility in shaping teacher leadership. (Pan & Chen, 2020) stated that empowering teachers through teacher leadership can increase their engagement and job satisfaction, which has a positive impact on the quality of education. (Setiyaningsih, 2020) added that teachers' commitment and job satisfaction will increase if they feel involved in the decision-making process.

The change in leadership approach is also characterized by a more humane orientation. (Ramzan & Khurram, 2023) highlighted the importance of a human-oriented leadership style, which creates a positive work climate. (Beauchamp et al., 2021) supported these findings by stating that principals' emotional involvement in interactions with staff can strengthen working relationships and team commitment.

The principal's ability to make strategic decisions also plays an important role in creating a conducive learning environment. (Towers, 2020) suggests that principals with good decision-making capacity tend to have a positive influence on school academic outcomes.

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On the other hand, organizational culture and leadership are also closely related to teachers' commitment to work. (Pranata & Syahril, 2023) showed that principals who are able to form a positive school culture will increase teacher loyalty and morale, thus supporting the achievement of optimal learning outcomes.

In terms of educational innovation, Beauchamp et al. (2021) assert that effective leadership plays a role in maintaining discipline and encouraging collaboration among educators. Collaborative leadership styles allow teachers to share innovative teaching methods with each other, which has an impact on improving the quality of education.

Principal leadership is also tested when facing a crisis, such as during the COVID-19 pandemic. Beauchamp et al. (2021) revealed that principals are required to be flexible and responsive in the face of unexpected changes. Therefore, principals need to continuously improve their competencies, not only in routine management, but also in strategic decision-making in times of crisis.

By understanding the various factors that influence teacher performance, principals can design effective interventions to create a conducive learning environment, while supporting the development of teacher professionalism and improving the quality of education.

Constraints faced by school principals in management information systems

Constraints faced by school principals in implementing Management Information Systems (MIS) in the educational environment: (1) Technology Infrastructure Constraints. One of the major barriers to SIM implementation is the limited technology infrastructure. Many schools, especially in remote areas, face problems such as unstable internet connections, limited hardware and poor software support. These conditions make it difficult for principals to access and utilize SIM optimally, hindering the data-based decision-making process. (2).Limited Human Resource Competence, Principals often face challenges in terms of information technology competence among staff and teachers. Lack of training and understanding of the use of SIM leads to resistance to change and difficulty in operationalizing the system. This

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impacts on the effectiveness of using SIM in supporting managerial and administrative activities in schools. (3). Limited Budget and Financial Support SIM implementation requires significant investment in hardware, software and human resource training. However, many schools face budget constraints that hinder this process. (4). Bureaucratic and Regulatory Barriers, Complex bureaucratic processes and unfavorable regulations can be a barrier to SIM implementation. Principals often have to deal with complicated and inflexible administrative procedures, which slow down the implementation of new systems.

Lack of support from education authorities can also reduce principals' motivation and initiative in adopting SIM thoroughly. (5). Challenges in Organizational Culture Change, The shift towards the use of management information systems requires a transformation of the organizational culture in schools. However, resistance to change and entrenched old habits can be significant obstacles. Principals need to manage this change with an inclusive and participatory approach, ensuring that all teacher members understand the benefits and goals of the management information system implementation. (Yulianti & Gistituati, 2024).

Method

Place and Time

a. Place of Research: This research was conducted at SMA Negeri 1 Kabila, located in Bone Bolango Regency, Gorontalo Province. The selection of this location is based on the consideration that the school is one of the leading schools in the region with a relatively good level of technological infrastructure readiness, but still faces challenges in implementing Management Information Systems.

b. Research Time: The research took place during April 2025, with the division of activity stages starting from initial observation, field data collection, to data analysis and validation.

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Data and Sources

The main data in this research is qualitative data in the form of: Verbal descriptions from in-depth interviews, Observations of the principal's activities and SIM-based work system, administrative documents related to the management of educational information systems.

Data Collection Techniques

This study used several data collection techniques to achieve triangulation, namely:

In-depth Interview: Semi-structured interviews were conducted with school principals and, if necessary, support staff involved in SIM implementation. The purpose was to explore perceptions, strategies and challenges faced.

Participatory Observation:

The researcher directly observed the implementation of information management in the school, including the interaction of the principal with the technology tools and the staff.

Data Analysis

The data analysis technique in this study uses a thematic analysis approach in accordance with the Miles and Huberman (1994) model, which consists of three main stages:

Data Reduction:

Filtering, summarizing, and focusing raw data from interviews, observations, and documentation into meaningful units that are relevant to the research focus.

Data Display:

Organizing data in the form of narratives, matrices, or thematic tables makes it easier for researchers to see patterns, relationships, and trends that emerge from the field.

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Conclusion Drawing/Verification:

Concluding findings based on the patterns that have been analyzed and verifying the truth of the data through the triangulation of sources and techniques.

Findings

The utilization of Management Information System (SIM) at SMA Negeri 1 Kabila has shown significant progress, especially under the leadership of the current School Principal. He demonstrates a deep understanding of the Principal essence and strategic function of SIM in supporting data-driven education governance. In the Principal interview, he explained that SIM is seen as an integrated electronic system that covers the Principal management of various important aspects of the School Principal such as student data, finance, curriculum, and staffing, which aims to simplify managerial processes and accelerate evidence-based decision-making (Yulianti & Gistituati, 2024).

In its implementation, the Principal mentioned that SMA Negeri 1 Kabila has integrated various digital platforms, including Dapodik and e-Rapor, as the Principal main media in managing academic and administrative information. He actively supervises through regular meetings and provides technical assistance for operators and teaching staff. This approach shows the Principal implementation of a participatory as well as transformational leadership style, which not only emphasizes technical mastery, but also builds collective motivation of all school elements to move forward together in the Principal use of technology (Greenberg & Baron, 1997; Gümüş & Bellibaş, 2020).

However, the Principal process of implementing SIM in schools is not free from various obstacles. One of the Principal biggest challenges is the Principal delay in data entry and the Principal low level of technological literacy among some teachers, especially those who are not used to digital systems. This was exacerbated by the Principal fact that manual administration was still dominant. To overcome this problem, the Principal took the Principal initiative to hold internal training in the Principal form of technical guidance, as well as convey the Principal importance of

using SIM in supporting the Principal effectiveness of school performance (Riswanda & Priandika, 2021).

Regarding infrastructure support, SMA Negeri 1 Kabila already has a number of hardware such as computers, main servers, and internet networks. Even so, the Principal considers that these facilities have not reached all areas of the Principal evenly, so improvements and additional facilities are needed. This situation is in line with the Principal findings of Sirojuddin et al. (2022), who stated that deficiencies in hardware and network limitations are crucial obstacles in the Principal implementation of information systems in educational institutions.

In the Principal decision-making dimension, the Principal emphasized the Principal importance of referring to the Principal data available in the Principal SIM. He explained that every policy, from planning work programs to selecting outstanding students, is always based on information that has been analyzed through the Principal digital platform. This approach reflects the Principal principle of evidence-based decision making, as proposed by Komarudin and reinforced in a study by Dewi & Puspitasari (2023), which asserts that SIM is a vital instrument in providing accurate data to support school managerial effectiveness.

Regarding human resource capacity development, the Principal admitted that he had attended SIM training organized by the Principal Indonesian Teachers Association. Unfortunately, there is no official training program in the Principal Gorontalo region that can reach school principals and educators as a whole. This condition is an important note for policy makers at the Principal provincial and central levels, so that the Principal provision of comprehensive training becomes a top priority in order to improve the Principal quality of technology-based school management (Pratama et al., 2022).

In terms of leadership roles, the Principal not only acts as a system controller but also as a motivator who seeks to foster collective awareness of the Principal importance of information technology in supporting the Principal education system. He consistently delivered socialization, structured the Principal division of tasks, and developed a

collaborative work culture to ensure that all school members were actively involved in the Principal SIM operation. This approach is in line with the Principal views of Yuda et al. (2023) who emphasized the Principal importance of transformational leadership in driving changes in work and learning culture.

Referring to Susanto's (2004) definition that SIM is an integrated system of people and machines that supports operations, management, and decision-making, the Principal implementation of SIM at SMA Negeri 1 Kabila shows a congruence between theory and practice. Although there is still room for improvement, the Principal direction of implementation by the Principal has led to the Principal achievement of professional and efficient education governance.

Finally, based on reflections from the Principal interviews and field observations, it can be concluded that the Principal has successfully embedded the Principal initial foundation of using SIM in school governance. Although still faced with various challenges, efforts to improve and innovate continue. In the Principal future, strengthening the Principal competencies of principals and staff through systematic training, as well as adequate technological infrastructure support, are key elements to realize digital-based school management in a complete and sustainable manner (Juliana et al., 2024; Dina, 2023).

Discussion

Analysis of Principals' Capabilities in Management Information Systems

Based on the Principal results of data collection and in-depth interviews, it was found that school principals show a good level of awareness and responsibility towards the Principal importance of SIM utilization, although in practice there are still significant structural and cultural barriers.

In terms of understanding the Principal concept of SIM, principals interpret this system as an integrated digital tool that is useful for managing educational information, including student, teacher, financial and curriculum data. This view is in

line with the Principal theory proposed by Susanto (2004), who refers to SIM as a combined system between humans and machines that supports managerial processes, especially in making more effective and efficient decisions. Therefore, the Principal conceptual understanding held by the Principal can be categorized as quite mature and in accordance with a strong theoretical foundation.

The Principal leadership exercised by the Principal reflects a transformational approach, which prioritizes empowering human resources and adapting to technological developments. In practice, principals actively supervise and provide technical assistance to staff and teachers, especially operators responsible for data input. This approach supports the Principal view of Yuda et al. (2023), which states that transformational leadership drives performance achievement through shared vision, motivation, and support for digital-based change.

Furthermore, principals have utilized a number of SIM platforms such as Dapodik and e-Rapor, as structured data management media. The Principal use of these platforms reflects the Principal operational practice of SIM as described by Komarudin, namely as a system that not only stores information but also as an analytical tool to develop data-driven educational strategies. This shows that the Principal implementation of SIM has started to lead to the Principal use of technology in supporting school strategic planning.

However, not all teachers can operate the Principal system optimally. There are still obstacles in the Principal digital competency aspect, especially from senior teachers who are used to manual administrative management. This shows a digital literacy gap, which then has an impact on the Principal speed and accuracy of data input. This finding is consistent with the Principal argument of Silviah et al. (2022), which states that a lack of technical competence and understanding of information management can lead to failure in the Principal organizational decision-making process.

One of the Principal main challenges that hinder the Principal effectiveness of SIM implementation is the Principal limited technological infrastructure such as hardware and internet networks that have not yet reached all areas of the Principal. In addition,

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the Principal absence of technical training officially organized by the Principal local government adds to the Principal burden of school principals to coach teachers independently. This reinforces the Principal findings of Sirojuddin et al. (2022), who highlighted that limited infrastructure and human resources are the Principal two main factors inhibiting the Principal development of SIM in education units.

Still in the Principal context of capacity building, research by Pratama et al. (2022) emphasized the Principal importance of continuous training as a vital component in school readiness to manage information systems. The Principal of SMA Negeri 1 Kabila himself hopes that in the Principal future there will be integrated training covering all aspects of SIM use, including technical and strategic training for teachers, administrative staff and school management.

Transformation towards school digitalization also requires changes in organizational culture. According to Yulianti & Gistituati (2024), the Principal success of SIM implementation largely depends on the Principal extent to which schools can build a work culture that is open to technology. At SMA Negeri 1 Kabila, there is still resistance from certain teachers who are not used to using digital systems. The Principal tries to overcome this with a strategy of socialization and motivation to create a technology and data-based work culture.

Implementation of SIM in Planning, Organizing, Implementing and Evaluating Functions

Planning and Organizing

In the Principal planning process, the Principal and the Principal management team develop an annual work program that includes the Principal use of SIM as the Principal main instrument for data management. Platforms such as Dapodik and e-Rapor are utilized to support data collection and processing. This activity is in accordance with the Principal concept of planning in SIM as described by Komarudin, which is to provide accurate information to develop school strategies and policies.

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In the Principal context of planning, the Principal has applied SIM as a tool in preparing the Principal annual work program, determining the Principal needs of teaching staff, and designing data-based policies. This practice is in accordance with Dewi & Puspitasari (2023) who emphasized that SIM, when used optimally, can improve the Principal efficiency of the Principal planning process and reduce the Principal risk of errors in determining managerial policies.

Implementation and Supervision

SIM implementation is carried out through direct involvement of the Principal monitoring data entry and supporting staff and teachers through coordination meetings and technical assistance. However, this implementation still faces obstacles in the Principal form of delays in data input and the Principal lack of ability of some teachers to operate the Principal application. To overcome this, the Principal initiated internal training or informal technical guidance.

The Principal also carries out the Principal organizing function by distributing roles to operators and teachers based on their respective competencies. This is shown through routine activities such as coordination meetings and monitoring the Principal implementation of tasks. This leadership style is relevant to the Principal views of Greenberg & Baron (1997), who consider that effective leaders are those who are able to coordinate human resources in achieving common goals through empowerment and appropriate delegation of authority.

In terms of supervision, the The Principal routinely monitors the Principal accuracy and timeliness of data entry through school operator reports. This is in accordance with the Principal control function in SIM, which aims to maintain the Principal quality of information used in decision-making. The Principal evaluation function also does not escape the The Principal's attention. Data from the Principal SIM is used to evaluate teacher performance, student achievement and the Principal effectiveness of school programs. This data-based evaluation reflects Stoner's principle in management theory, as cited by Riswanda & Priandika (2021), which states that reflective decision making requires accurate and reliable information, a key function

of SIM in supporting organizational accountability.

Evaluation and Decision Making

SIM is used as the Principal Basis for the Principal evaluation process and the Principal preparation of school reports. Evaluation is conducted periodically, at least twice a semester. Data from SIM is used in determining policies such as the Principal selection of outstanding students and the Principal implementation of school work programs. This refers to the Principal role of SIM as an evaluative tool and the Principal Basis for management accountability (Yulianti & Gistituati, 2024).

The Principal implementation of SIM has been clearly identified. The Principal barriers are not only technical, but also structural and cultural. Therefore, adaptive leadership is needed to bridge the Principal change process. This is in accordance with the Principal view of Beauchamp et al. (2021), which underlines that leaders who are flexible and responsive in the Principal face of change will be better able to form work teams that are ready to innovate and transform.

Based on the Principal overall findings, it can be concluded that the Principal of SMA Negeri 1 Kabila has carried out a progressive managerial role in the Principal context of SIM management, although it is still in the Principal strengthening and stabilizing stage. The Principal's responsibilities are not only limited to technical aspects, but also to developing work culture, empowering staff, and establishing synergy with external authorities such as the Principal education office.

By looking at the Principal correlation between the Principal research focus, field findings and the Principal theories used, it can be concluded that SIM management at SMA Negeri 1 Kabila has a fairly strong foundation. Efforts to increase the Principal capacity of human resources, strengthen infrastructure and consistent policy support will determine the Principal success of the Principal implementation of this information system in the Principal future. If managed with a collaborative and data-driven approach, SIM will become the Principal backbone for effective, transparent and quality-oriented education governance.

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Principal's Constraints in SIM Management and Utilization

In the Principal interview, the Principal pointed out some of the Principal main constraints faced in the Principal management and utilization of SIM, namely:

Limited Technological Competence

Some teachers and staff do not have adequate digital literacy, which hampers the Principal smoothness of data entry and system use. This is in line with the Principal findings of Riswanda & Priandika (2021), that limited human resources are a common obstacle in the Principal implementation of SIM in schools.

Uneven Technology Infrastructure

The School Principal has several computer devices and one central server, but their availability has not covered all rooms or work units. The Principal internet connection is also not stable at all points. This indicates a bottleneck in the Principal hardware aspect as mentioned by Sirojuddin et al. (2022).

Delays in Data Input

Delays often occur due to the Principal large administrative burden that must be handled by teachers manually, and not all teachers understand the Principal flow of digital data input.

Limited Official Training

The Principal absence of integrated training at the Principal regional level (especially in Gorontalo) is a factor inhibiting the Principal capacity building of school principals and staff in SIM management.

Conclusions

Comprehensive understanding of the Principalconcept and urgency of Management Information Systems (MIS) in education management. SIM is positioned as a strategic instrument to support managerial functions such as planning, implementation, supervision and evaluation based on accurate and real-time data (Susanto, 2004; Yulianti & Gistituati, 2024). The Principaluse of platforms such as Dapodik and e-

Rapor shows that SIM has been integrated into school management practices, although at the Principalimplementation level there are still various challenges.

The Principalmain obstacles faced by school principals include low digital literacy among educators, limited technological infrastructure, and lack of formal training facilitated by authoritative parties (Riswanda & Priandika, 2021; Sirojuddin et al., 2022). This situation resulted in delays in data entry, low effectiveness of SIM utilization, and dependence on school operators in information management.

Nevertheless, the The Principal showed high initiative and commitment through participative leadership approaches, such as organizing internal training, regular coordination, and structured division of roles within the Principalschool management team. This strategy reflects the Principaltransformational leadership style as described by Greenberg & Baron (1997), which focuses on empowerment and collaboration to achieve organizational goals.

Overall, the Principalability of school principals to manage SIM has shown a positive direction. However, to achieve optimal effectiveness, more systematic support is still needed in the Principalform of human resource capacity building through continuous training, equitable infrastructure provision, and education policies that are adaptive to the Principalneeds of digitizing school management. With the Principalsynergy between school leadership and institutional support, SIM implementation in education units will be more efficient, responsive and sustainable.

References

Adinda, N. S., & Mulyadi, D. N. (2024). Analisis sistem dalam peningkatan kinerja manajerial di sekolah dasar. *Jurnal Ilmu Manajemen Pendidikan*. https://jurnal.kopusindo.com/index.php/jimp/article/view/448

Aisyah, S., Harliyani, W., Yantoro, Y., & Setiyadi, B. (2023). Penerapan sistem informasi manajemen pendidikan dalam proses pembelajaran SDN 14/I Sungai Baung. JIIP - Jurnal Ilmiah Ilmu Pendidikan, 6(10), 7569–7579. https://doi.org/10.54371/jiip.v6i10.2978

Azrafiandi, M., & Agustin, H. (2023). Sistem informasi manajemen pendidikan (simp) dalam pengambilan keputusan di SMA IT Soeman Hs Pekanbaru. Journal. Uir. Ac. Id, 3(4), 17–29.

AHSAN MAFAZA INDONESIA

E-ISSN: xxxx-xxxx
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https://ejournals.ahsanmafazaindonesia.org/index.php/IJEMLOS

International Journal of Education Management, Leadership, and Organisational Studies

Beauchamp, G., Hulme, M., Clarke, L., Hamilton, L., & Harvey, J. (2021). 'People Miss People': a study of school leadership and management in the Principalfour nations of the PrincipalUnited Kingdom in the Principalearly stage of the PrincipalCOVID-19 Pandemic. Educational Management Administration & Leadership, 49(3), 375–392. https://doi.org/10.1177/1741143220987841

Dede Fuad, B. (2024). Studi tentang efektivitas sistem informasi manajemen pendidikan dalam mendukung kompetensi guru. Universitas Galuh. http://repository.unigal.ac.id/handle/123456789/5223

Dewi, R. N., & Puspitasari, W. (2023). Implementasi sistem manajemen akuntansi dalam pengambilan keputusan. *Journal of Economics and Business* Ubs, 2(6), 3402–3411. https://doi.org/10.52644/joeb.v2i6.673

Dian, D., Suhendar, R., & Sovian, S. (2021). The PrincipalInfluence of Principal's Leadership on Teacher Performance. Al-Ishlah Jurnal Pendidikan, 13(3), 2639–2650. https://doi.org/10.35445/alishlah.v13i3.697

Dina, S. S. (2023). The Principalfunction of management information systems in improving teacher productivity. Journal of Management in Education.

Dzkia, M. S., Maksum, H., & Anwar, M. (2025). Integrasi manajemen kurikulum dan evaluasi program dalam pendidikan teknologi dan kejuruan. Edu Research, 2(1). http://iicls.org/index.php/jer/article/view/825

Farida, I., Din, M. U., Eralakaza, O. B., & Djafri, N. (2022). Academic Supervision and Principal Leadership's Influence on Teacher Performance. Pijed, 1(2), 203–210. https://doi.org/10.59175/pijed.v1i2.17

Greenberg, J., & Baron, R. A. (1997). Behavior in organizations: Understanding and managing the Principalhuman side of work. Prentice Hall.

Gümüş, S., & Bellibaş, M. Ş. (2020). The PrincipalRelationship Between Professional Development and School Principals' Leadership Practices: The PrincipalMediating Role of Self-Efficacy. International Journal of Educational Management, 34(7), 1155–1170. https://doi.org/10.1108/ijem-10-2019-0380

Hartini, Y., & Noorhafizah, N. (2025). Studi literature review peran kepemimpinan dan strategi manajemen mutu untuk kinerja pendidikan. Jurnal Penelitian Pendidikan,15(2). https://www.jurnalp4i.com/index.php/learning/article/view/4339

Hermawan, A. B., Zabina, K. A., Alfarisqi, M. R., & Wati, S. F. A. (2023). Systematic Literature Review Tentang Manajemen Proyek Dalam Sistem Informasi. Sitasi, 3(1), 1–11. https://doi.org/10.33005/sitasi.v3i1.453

Juliana, N., Wahyono, H., & Wardoyo, C. (2024). Enhancing quality education through technology adoption, well-being, commitment, and competence among educators. Journal of Lifestyle and Education for SDGs. https://www.sdgsreview.org/LifestyleJournal/article/view/2106

Khoirurrozikin, A. (2024). Evaluasi sistem informasi akuntansi di Balai Besar Guru Penggerak. UIN Malang. http://etheses.uin-malang.ac.id/id/eprint/72921

Loilatu, S. H., Rusdi, M., & Musyowir, M. (2020). Penerapan sistem informasi manajemen pendidikan dalam proses pembelajaran. Jurnal Basicedu, 4(4), 1408–1422.

AHSAN MAFAZA INDONESIA

E-ISSN: xxxx-xxxx
Vol. 01. No. 01. July, 2025. pp. 77-105
https://ejournals.ahsanmafazaindonesia.org/index.php/IJEMLOS

International Journal of Education Management, Leadership, and Organisational Studies

Mawaddah, N. (2024). Peran kepala sekolah dalam pemberdayaan perpustakaan. UISU. https://repository.uisu.ac.id/handle/123456789/3174

Musfirah, M., & Mardhiah, B. (2024). Implementasi sistem informasi manajemen dalam mutu layanan pendidikan. At-Taklim, 5(1). https://journal.hasbaedukasi.co.id/index.php/at-taklim/article/view/410

Najah, A. T. S. (2025). Manajemen kurikulum integratif untuk kompetensi abad 21. UIN Malang. http://etheses.uin-malang.ac.id/id/eprint/75855

Nelianti, Fitria, H., & Puspita, Y. (2021). The PrincipalInfluence of School Leadership and Work Culture on Teacher Professionalism. https://doi.org/10.2991/assehr.k.210716.211

Niamillah, M. (2023). The Principalrole of digital technologies on fostering green business practices in contemporary education. OSF Preprints. https://osf.io/h8bax/download

Pan, H.-L. W., & Chen, W. (2020). How Principal Leadership Facilitates Teacher Learning Through Teacher Leadership: Determining the PrincipalCritical Path. Educational Management Administration & Leadership, 49(3), 454–470. https://doi.org/10.1177/1741143220913553

Pranata, R., & Syahril, S. (2023). The PrincipalInfluence of Principal Leadership and Organizational Culture on the PrincipalWork Commitment of Public High School Teachers. Eduvest - Journal of Universal Studies, 3(3), 612–627. https://doi.org/10.59188/eduvest.v3i3.773

Pratama, D. M., Nulhaqim, S. A., & Basar, G. G. K. (2022). Sistem Informasi Manajemen Dan Pemanfaatannya Pada Organisasi Pelayanan Kemanusiaan Aksi Cepat Tanggap Kabupaten Bandung Barat. Share Social Work Journal, 12(1), 23. https://doi.org/10.24198/share.v12i1.34699

Putri, A. N., & Ganggi, R. I. P. (2022). Manajemen Informasi Kesehatan Terhadap Stigma Masyarakat Dalam Menghadapi Pandemi Covid-19 Di Desa Tambakromo, Kecamatan Cepu, Kabupaten Blora. Anuva Jurnal Kajian Budaya Perpustakaan Dan Informasi, 6(4), 479–492. https://doi.org/10.14710/anuva.6.4.479-492

Putri, M. P., & Bobby, B. (2020). Sistem Informasi Manajemen Proyek PT. Samudera Perkasa Konstruksi Berbasis Web. Matrik Jurnal Manajemen Teknik Informatika Dan Rekayasa Komputer, 20(1), 85–96. https://doi.org/10.30812/matrik.v20i1.716

Rahman, B. (2022). Principal's Leadership Style Based on Path-Goal Theory: A Literature Review. International Journal of Current Science Research and Review, 05(06). https://doi.org/10.47191/ijcsrr/v5-i6-16

Ramzan, N., & Khurram, A. F. A. (2023). A Comparative Analysis of Headteachers' Task-Oriented Leadership Behaviour and People-Oriented Leadership Behaviour at Secondary School Level. Tibss, 1(4), 129–135. https://doi.org/10.48112/tibss.v1i4.654

Rifdillah, M., & Sappayani, S. (2024). Manajemen strategi kepala sekolah dalam meningkatkan pendidikan karakter Islam. SOCIAL: Jurnal Pendidikan dan Sosial Humaniora. https://jurnalp4i.com/index.php/social/article/view/3072

Riswanda, D., & Priandika, A. T. (2021). Analisis dan perancangan sistem informasi manajemen pemesanan barang berbasis online. J. Inform. Dan Rekayasa Perangkat Lunak, 2(1), 94–101.

Ritonga, E. N. (2025). Strategi kepala sekolah dalam tata kelola administrasi kesiswaan. UIN Suska Riau. http://repository.uin-

AHSAN MAFAZA INDONESIA

E-ISSN: xxxx-xxxx
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https://ejournals.ahsanmafazaindonesia.org/index.php/IJEMLOS

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suska.ac.id/88682/1/SKRIPSI%20ELDA%20NURMAWAN%20RITONGA%20-%20Elda%20Nurmawan.pdf

Rupbianti, V., Mudrikah, Y. P., & Suwendha, D. O. (2022). Penggunaan Sistem Informasi Manajemen Terhadap Kualitas Laporan Keuangan Pada Ukm Kuliner Malam Di Kecamatan Tulungagung. https://doi.org/10.31219/osf.io/uth2e

Saputra, L. A., Akbar, F. M., Cahyaningtias, F., Ningrum, M. P., & Fauzi, A. (2023). Ancaman Keamanan Pada Sistem Informasi Manajemen Perusahaan. Jurnal Pendidikan Siber Nusantara, 1(2), 58–66. https://doi.org/10.38035/jpsn.v1i2.48

Sarjito, A. (2019). Model Kepemimpinan Digital di era Revolusi Industri 4.0. Universitas Pertahanan Indonesia.

Setiyaningsih, T. T. (2020). Influence of School Leadership, Discipline, and Work Motivation Toward High School Teacher Performance. Harmoni Sosial Jurnal Pendidikan Ips, 7(1), 65. https://doi.org/10.21831/hsjpi.v7i1.13423

Setyowati, W., & Nugroho, E. (2020). Penyusunan Rencana Strategis Sistem Informasi Dan Teknologi Informasi Di Dinas Kesehatan Kabupaten Sleman. Journal of Information Systems for Public Health, 4(1), 18. https://doi.org/10.22146/jisph.24447

Silviah, R., Fawzi, R., & Rizky, R. I. (2022). Literature Review Manajemen Informasi: Database, Teknologi Dan Brainware. Jurnal Ilmu Hukum Humaniora Dan Politik, 2(3), 347–357. https://doi.org/10.38035/jihhp.v2i3.1053

Siregar, T. R., Dalimunthe, Y. A., & Hadinata, E. (2023). Rancang Bangun Sistem Informasi Manajemen Bus Menggunakan Framework Codeigniter Pada Bus Panorama. Syntax Journal of Software Engineering Computer Science and Information Technology, 4(1), 255–260. https://doi.org/10.46576/syntax.v4i1.2884

Sirojuddin, A., Amirullah, K., Rofiq, M. H., & Kartiko, A. (2022). Peran Sistem Informasi Manajemen dalam Pengambilan Keputusan di Madrasah Ibtidaiyah Darussalam Pacet Mojokerto. ZAHRA: Research and Tought Elementary School of Islam Journal, 3(1), 19–33.

Sonia, N. R. (2020). Implementasi Sistem Informasi Manajemen Pendidikan (Simdik) Dalam Meningkatkan Mutu Pendidikan Di Madrasah Aliyah Negeri 2 Ponorogo. Southeast Asian

Towers, E. (2020). Why Do Headteachers Stay in Disadvantaged Primary Schools in London? Leadership and Policy in Schools, 21(2), 206–221. https://doi.org/10.1080/15700763.2020.1759651

Yuda, M. S., Rachmawati, I., & Sugihartto, S. (2023). Transformational Leadership Style of Principals in Primary Schools. International Journal of Economics (Ijec), 2(2), 211–221. https://doi.org/10.55299/ijec.v2i2.444

Yulianti, L., & Gistituati, N. (2024). Peran Sistem Informasi Manajemen (SIM) Dalam Pengambilan Keputusan Di SMPN 3 Sawahlunto. Jurnal Niara, 17(1), 223–234.

Zamroni, M. A. (2020). Penerapan Sistem Informasi Manajemen Pendidikan Dalam Proses Pembelajaran Di SMP Negeri 1 Dlanggu. Munaddhomah Jurnal Manajemen Pendidikan Islam, 1(1), 11–21. https://doi.org/10.31538/munaddhomah.v1i1.28