



## A Qualitative Study on the Implementation of Academic Information System Management (SINKAD) in Enhancing Educational Administration Efficiency at Wearnes Malang

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### ABSTRACT

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This study aims to analyze the implementation of Academic Information System (SINKAD) management in improving the efficiency of educational administration at Wearnes Education Center Malang. Before the implementation of SINKAD, administrative activities such as grade input, student registration, and schedule management were carried out manually, which often caused delays and data errors. This research employs a qualitative method with a case study approach, using interviews, observations, and documentation involving administrative staff and system users. The results of the study indicate that the implementation of SINKAD has had a positive impact on work efficiency and administrative services. Administrative processes that previously required 60–90 minutes can now be completed within 15–25 minutes. In addition, data accuracy has improved, interdepartmental coordination has become more effective, and student services are faster and more transparent. The study concludes that effective SINKAD management enhances the effectiveness and efficiency of educational administration and supports professional academic governance at Wearnes Malang.

**Keywords:** Academic Information System, SINKAD Management, Administrative Efficiency, Wearnes Malang

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### 1. INTRODUCTION

The development of information and communication technology (ICT) has had a significant impact on various sectors, including education. One of the most affected aspects is academic administration, where processes such as student data management, attendance tracking, assessment, and reporting can be carried out faster, more accurately, and with a lower risk of error compared to manual methods. The digitalization of academic administration has been proven to enhance the effectiveness and efficiency of educational services through the use of academic information systems (Triandini & Kuswantoro, 2025).

In Indonesia, many educational institutions have implemented Academic Information Systems (often abbreviated as SIAKAD or SINKAD in some institutions) as part of their academic information management systems. Research by Kurniawan et al., (2025) shows that the SIAKAD used in *Madrasah Aliyah Negeri* significantly accelerates the processes of student data management, attendance recording, grading, and academic report preparation.

Other studies in the context of vocational high schools have also found that this system improves the productivity of administrative staff, accelerates decision-making, and reduces the use of time and administrative effort (Ilham, 2025).

Wearnes Education Center in Malang has already implemented the SINKAD system, and previous research has examined the quality of SINKAD and the academic/non-academic services that influence student satisfaction (Fitriyani et al., 2019). However, although there have been studies on student satisfaction, few have explored in depth how the management of the academic information system is carried out at Wearnes, particularly in relation to process management, human resources, training, quality control, and how all these factors affect overall administrative efficiency.

Management is a key element in the successful implementation of an information system. Without proper management that includes planning, organizing, controlling, coordinating, and evaluating, the academic information system may not function optimally. Several factors may contribute to this, such as inadequate technological facilities, administrative staff lacking sufficient competence, or the absence of standardized and regularly evaluated system usage procedures. These issues can affect the speed, accuracy, and quality of administrative services. Study of Ilham (2025) shows that although the system has been implemented, its effectiveness remains limited due to insufficient staff training and inadequate ICT infrastructure.

As a private educational institution, Wearnes Malang has the potential to gain significant benefits from the proper management of its academic information system. Administrative efficiency can be reflected in reduced time for administrative processes, increased data accuracy, easier access to information, and improved quality of services for students and other stakeholders. Achieving this requires a thorough understanding of how academic information system management is carried out at Wearnes, who the involved parties are, how policies are implemented, what challenges are faced and what strategies are used to overcome those challenges.

Based on these circumstances, this qualitative research is important to explore the experiences and perspectives of various actors at Wearnes (administrative staff, system managers, lecturers, and students) regarding the implementation of SINKAD management. This study is expected to identify best practices, real obstacles and relevant recommendations so that the academic information system at Wearnes Malang can be managed effectively and make a maximum contribution to the efficiency of educational administration. Therefore, the results of this study are expected to be beneficial not only for Wearnes itself but also for other educational institutions with similar contexts.

## **2. LITERATURE REVIEW**

### ***Definition of Academic Information System (SINKAD)***

The Academic Information System (SINKAD, or SIAKAD in many institutions) is an information technology-based system designed to facilitate the management of data and academic processes within educational institutions. Such data may include student information, attendance, grades, schedules, admissions, and academic reporting. With this system, processes that were previously manual or paper-based become automated, allowing integration between various academic functions so that the resulting information is more accurate, up to date, and easily accessible to those who need it. Research by Albhantany et al., (2022) on the Web-Based Academic Information System at Tanri Abeng University, Jakarta, showed that the system simplified the input of academic

data, scheduling, and the dissemination of academic information in a faster, more accurate and efficient manner.

In addition, the academic system also serves as a basis for managerial decision-making within educational institutions. With SINKAD, administrators and staff can obtain real-time academic reports and analyses regarding academic performance, attendance, and other data trends. This supports transparency, accuracy, and preventive action when issues arise, such as high absenteeism or very low grades in a particular course or subject. Research by Alfarizi et al., (2023) on the implementation of Academic Information Systems found that such systems are viewed as strategic tools for improving the quality and efficiency of education through systematic and digital management of academic data in several universities.

### ***Educational Administration Efficiency***

Educational administration efficiency refers to an institution's ability to manage administrative tasks, such as student registration, academic data processing, attendance tracking, assessment, reporting, and academic finance using minimal resources (time, energy and cost) while still producing high-quality outcomes. In the context of educational administration, efficiency means accelerating administrative processes, reducing errors or data redundancy and minimizing the use of time-consuming manual procedures. Research by Kurniawan et al., (2025) shows that SIAKAD significantly accelerates various academic processes, including student data management, attendance recording, grade input, and the preparation of academic reports at *Madrasah Aliyah Negeri*.

Administrative efficiency is also related to non-technical aspects such as organization, staff training, and well-structured work procedures. Technology alone is not sufficient if administrative staff lack adequate competence or if work procedures are unclear or overlapping. Research by Sugandi & Rodhiyah (2024) revealed that the digitalization of administrative systems (e-administration and academic applications) has reduced administrative working time, improved data accuracy, and facilitated information access, thereby supporting operational efficiency in schools such as SDIT Harapan Umat.

### ***Implementation of SINKAD in Educational Institutions***

The implementation of the Academic Information System (SINKAD/SIAKAD) in educational institutions involves the integration of technology (hardware and software), academic workflows, and human resources to automate functions such as registration, attendance, grading, scheduling, and reporting. When carried out with proper planning including process mapping, system module customization according to institutional needs, and system testing, SINKAD can streamline administrative workflows, improve data accuracy, and facilitate information access for students, lecturers, and administrative staff. Research by (Alfarizi et al., 2023) indicates that web- or cloud-based SIAKAD implementation improves academic service efficiency and simplifies reporting, especially when supported by adequate user training and technical assistance.

However, the implementation of SINKAD often encounters non-technical challenges, such as staff resistance to change, limited user competence, lack of ongoing training, and uneven ICT infrastructure. Moreover, issues related to governance and process integration, such as procedures not being aligned with the new system or the absence of data quality control policies often reduce system effectiveness. Therefore, recent research and best practices emphasize the need for a managerial approach:

comprehensive implementation planning, user training and mentoring, regular monitoring and evaluation, and IT governance policies to ensure that SINKAD truly enhances administrative efficiency. Research by Wahyudin et al., (2024) underscores that managerial factors including planning, training, leadership support and quality control are the primary determinants of successful implementation.

### ***Management of the Academic Information System at Wearnes Malang***

Within the environment of Wearnes Education Center Malang, the implementation of SINKAD represents a significant innovation in supporting the effectiveness of educational administrative governance. SINKAD functions to integrate various processes such as the management of one-year Diploma student data, class schedules, grades, and academic reports into a single digital platform accessible to the entire academic community. According to Hardyanti & Fauzi (2024), effective information system management in educational institutions requires coordination among technical aspects, human resources, and organizational policies to ensure optimal system performance.

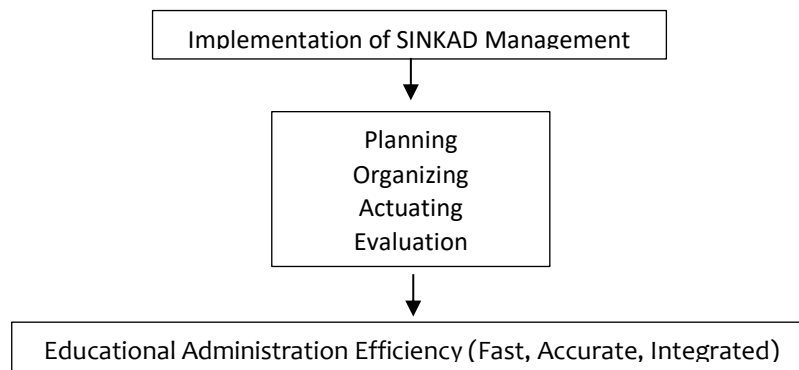
The Academic Information System (SIKAD or SINKAD) is an information technology-based system designed to manage academic data and activities in an integrated manner, including student registration, grade management, class scheduling, and academic reporting. According to Laudon & Laudon (2020), an information system is a set of interrelated components that collect, process, store, and disseminate information to support decision-making and control within an organization. In the educational context, such a system helps institutions enhance efficiency, accuracy, and transparency in academic administrative processes.

The implementation of SINKAD at Wearnes Malang not only supports administrative efficiency but also improves the quality of academic services by providing real-time and transparent data. According to Lestari (2025), educational institutions that implement academic information systems in a structured manner experience a significant increase up to 40% in administrative process efficiency. This demonstrates that effective information system management serves as a vital foundation for creating modern, efficient, and accountable educational services.

### ***Conceptual Framework***

To understand the relationship between the implementation of an academic information system and the improvement of educational administrative efficiency, a conceptual framework is needed to illustrate the direction and logical flow of the research. This conceptual framework serves as a foundation for analyzing how the implementation of SINKAD management can influence the effectiveness of administrative governance within Wearnes Malang. Through this framework, the researcher seeks to explain the interrelationship between components of information system management from planning and implementation to evaluation and the expected outcome in the form of enhanced efficiency in educational administrative services.

The conceptual framework in this study illustrates the relationship between the implementation of Academic Information System (SINKAD) management and the efficiency of educational administration at Wearnes Malang.



**Figure 1. Proposed Conceptual Framework**

The implementation of SINKAD management includes the processes of planning, organizing, executing, and evaluating the information system used to support the institution’s academic and administrative activities. Through effective management practices, the academic information system is expected to accelerate service processes, improve data accuracy, and facilitate information access for all members of the academic community. Thus, the more optimal the implementation and management of SINKAD, the higher the level of administrative efficiency within the institution. This framework emphasizes that the success of information system management plays a direct role in creating effective, efficient, and transparent administrative governance within the educational environment.

**3. METHODOLOGY**

This study employs a qualitative approach with a descriptive research design, aiming to gain an in-depth understanding of the implementation of Academic Information System (SINKAD) management in improving educational administrative efficiency at Wearnas Malang. The qualitative approach was chosen because it allows the researcher to comprehensively explore the processes, experiences, and perceptions of SINKAD users, including administrative staff, lecturers, and students. Through this approach, the researcher focuses not only on the outcomes but also on how the system implementation process is carried out and the factors that influence it.

The research subjects include individuals directly involved in the use and management of SINKAD at Wearnas Malang, such as administrative staff, lecturers, and the head of the academic department. The selection of informants was conducted using a purposive sampling technique, which involves choosing participants based on specific criteria relevant to the research objectives. Data were collected through in-depth interviews, direct observations, and documentation related to administrative activities involving the use of SINKAD. These techniques were chosen to ensure that the researcher obtains rich, valid, and contextual data regarding the implementation of the information system.

Data analysis was carried out using the interactive analysis model of Miles and Huberman, which consists of three main stages: data reduction, data display, and conclusion drawing. The validity of the data was tested through source and technique triangulation, by comparing the results of interviews, observations and documentation to ensure information consistency. The results of the analysis were then interpreted to provide an

in-depth description of how SINKAD management is implemented, the obstacles encountered and its impact on the efficiency of educational administration at Wearnas Malang.

#### 4. RESULTS

The results of the study show that the implementation of the Academic Information System (SINKAD) management at Wearnas Malang has been carried out quite effectively and in a structured manner. This system is used to support various academic activities such as course registration (KRS), grade input, class scheduling, preparation of academic reports, and student data services. Based on interviews with academic staff and lecturers, the implementation of SINKAD has made it easier to access and manage data in an integrated way. Users can monitor students' academic activities in real-time without the need for time-consuming manual processes.

Field findings also revealed that the planning and organization stages of SINKAD were well executed by the management. Before the system was fully implemented, the institution conducted internal training sessions for staff and lecturers to ensure user readiness. In addition, technological infrastructure such as network systems, servers, and computer equipment was upgraded to support optimal system performance. This demonstrates the institution's commitment to digital transformation and the improvement of academic administrative service quality.

During the implementation stage, SINKAD proved to significantly accelerate various administrative processes. Previously, the process of collecting and compiling final semester grades took up to three days, as it had to be done manually using Excel files. After the adoption of SINKAD, the required time decreased drastically to about four hours, as the system could automatically integrate lecturer and academic data. The course registration process, which previously took two days, now only requires about three hours through the online system. This indicates a time efficiency improvement of around 70–85% compared to previous manual processes.

In addition to time efficiency, improvements were also observed in data accuracy and organization. The SINKAD system features automatic validation to prevent input errors and duplicate student data. Based on interviews with the academic division, administrative errors decreased by up to 50% after the system's implementation. Academic reports can now be generated in real-time, and class scheduling is more organized because the system can detect scheduling conflicts between lecturers and classrooms. These findings indicate that effective information system management can significantly enhance the productivity and effectiveness of academic staff.

However, the study also identified several challenges in SINKAD implementation. Some staff members experienced difficulties adapting to the new system, especially during the early stages of use. In addition, unstable internet connections and limited technical support at certain times occasionally disrupted system operations. Nevertheless, the management promptly addressed these issues by providing additional training and improving IT support, allowing the system to operate more optimally.

Overall, the findings emphasize that the implementation of SINKAD management at Wearnas Malang has had a tangible impact on improving educational administrative efficiency. Administrative tasks have become faster, more accurate, and more transparent, providing a better service experience for both students and lecturers. The effectiveness of the system's use demonstrates that well-designed information management can strengthen academic governance and support the institution's goal of achieving modern and efficient educational administration.

## 5. DISCUSSION

### *Efficiency as the Goal of Financial Digitalization*

The findings of this study indicate that the implementation of Academic Information System (SINKAD) management at Wearnas Malang has brought significant changes to the educational administrative process. Work procedures that were previously conducted manually can now be carried out digitally, in an integrated, and automated manner. This has led to improvements in time efficiency, data accuracy, and the transparency of academic information. These findings align with the view of Laudon & Laudon (2020), who stated that a well-managed academic information system can accelerate administrative processes and enhance institutional performance through data automation and integration.

From a managerial perspective, the success of SINKAD implementation at Wearnas Malang cannot be separated from the systematic processes of planning, organizing, implementation, and evaluation. The institution's management placed great emphasis on training both staff and lecturers to ensure they could operate the system effectively. This supports McLeod., D., & Clarke., N., (2021) theory, which emphasizes that the human factor is a key component in the successful implementation of information systems. Through adequate training and interdepartmental coordination, the transition from a manual to a digital system proceeded smoothly without major disruptions to academic services.

The improvement in administrative efficiency can be observed through reduced working time and increased data accuracy. Based on the findings, the average time required to prepare academic reports decreased from 2–3 days to about 4–5 hours, while data input errors were reduced by up to 50%. These results reinforce O'Brien, J. A., & Marakas, G. M., (2021) theory, which explains that information system integration can enhance organizational productivity and effectiveness through fast and accurate data management. Thus, SINKAD functions not only as an administrative tool but also as a means of control and monitoring of academic performance.

However, this study also identified several challenges in the SINKAD implementation process. The obstacles encountered included limited technical skills among some staff members and dependency on an internet connection that was occasionally unstable. This is consistent with the findings of Shaqia Nur et al., (2024), who stated that common obstacles in the implementation of information systems in higher education include the readiness of human resources, IT infrastructure, and management's commitment to digital innovation. Therefore, continuous training and system maintenance are required to ensure that SINKAD's performance remains optimal.

In addition to time efficiency and data accuracy, this study also found improvements in the aspects of transparency and ease of access to academic information. Students can now monitor their grades, class schedules, and academic administrative status directly through the system. This supports the principles of Good Governance in education, where information transparency and accessibility serve as key indicators of public service quality. In line with the studies of Maulana et al., (2025) and Winda et al., (2025), the digitalization of academic administration can strengthen accountability and increase the academic community's trust in the institution.

Overall, this discussion emphasizes that the implementation of SINKAD management at Wearnas Malang has made a significant contribution to enhancing the efficiency and quality of educational administrative services. The main success factor lies in the synergy between technology, human resources, and institutional management support. If the system continues to be developed with regular evaluation and updates, SINKAD has the potential to become a model for efficient, accurate and sustainable educational administrative governance in the era of digital transformation

## **6. CONCLUSION**

This study concludes that the implementation of Academic Information System (SINKAD) management at Wearnas Malang has been effective and has had a significant positive impact on improving the efficiency of educational administration. Through the application of an integrated system, various academic activities such as course registration (KRS), grade input, class scheduling, and academic report generation can now be carried out more quickly, accurately, and in a more organized manner compared to the previous manual system.

The achieved administrative efficiency can be seen in the reduced administrative working time and the decrease in data input errors following the implementation of SINKAD. The system has also improved service speed for students and lecturers, as data can now be accessed in real time. These results indicate that well-planned information system management can serve as an important instrument in enhancing the performance of educational institutions in the digital era.

The success of SINKAD implementation is determined not only by its technological capability but also by management support, the readiness of human resources, and adequate technological infrastructure. Wearnas Malang has demonstrated that proper training and coordination among academic staff, lecturers, and the IT department are key factors in optimizing the use of information systems. However, there remains a need for continuous user capacity building and regular system maintenance to address technical challenges that may arise during operation.

Overall, this study emphasizes that the implementation of Academic Information System (SINKAD) management plays a strategic role in creating efficient, accurate, and transparent educational administration. Continuous and adaptive implementation aligned with technological advancements will strengthen the governance of educational institutions in the future. Thus, Wearnas Malang can serve as a successful example of academic information system implementation supporting digital transformation in the education sector.

Based on the findings, it is recommended that the management of Wearnes Malang continue to conduct regular updates and evaluations of the Academic Information System (SINKAD) to ensure its alignment with academic needs and technological developments. Staff and lecturers should receive ongoing training to optimize system use effectively, while the IT team is encouraged to strengthen infrastructure and data security to maintain stable system operations. Furthermore, future research is recommended to expand the study to other educational institutions in order to gain a more comprehensive understanding of the effectiveness of academic information system implementation in the education sector.

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