

Implementation of the Educational Management Information System (Emis) in the Annual Compilation Program

Arhami¹, Dodi Ilham Mustaring², Arifuddin³

^{1,2,3} UIN Palopo, Indonesia; dodi@iainpalopo.ac.id

ARTICLE INFO

Keywords:

Annual Compilation Program;
Emis; Implementation.

Article history:

Received 2025-04-15

Revised 2025-07-12

Accepted 2025-09-19

ABSTRACT

The rapid development of information and communication technology has had a profound impact on the education sector, especially in the management of data and information systems. The aim of this research is to analyze the Implementation of the Educational Management Information System (Emis) in the Annual Compilation Program at Palopo State Islamic Junior High School. Qualitative method. Data collection using interviews and observations. The implementation of EMIS at MTsN Palopo plays a vital role in managing accurate data for annual program planning, covering student information, class groupings, resources, and funding. Its policy involves organization, interpretation, and application stages with collaboration among staff, regular training, and support from the Ministry of Religious Affairs. Despite its importance as a tool for monitoring and evaluation, challenges such as incomplete or inconsistent student data, unreported transfers, and technical constraints from the central system remain obstacles to its optimal use.

This is an open access article under the CC BY SA license.



Corresponding Author:

Arhami

UIN Palopo, Indonesia; dodi@iainpalopo.ac.id

1. INTRODUCTION

The rapid development of information and communication technology has had a profound impact on the education sector, especially in the management of data and information systems. Educational institutions are increasingly required to adapt to digitalization in order to improve efficiency, accuracy, and accountability in their administrative processes. One of the key instruments used by Islamic educational institutions in Indonesia is the Educational Management Information System (EMIS). EMIS functions as a centralized platform for collecting, processing, and reporting educational data, thereby supporting policy formulation and institutional development. Its presence reflects the government's effort to standardize data collection in Islamic schools, including madrasah, so that decision-making is based on accurate, timely, and comprehensive information (Ministry of Religious Affairs, 2021).

As a digital-based information management tool, EMIS is designed to address issues that arise from traditional data collection methods, such as duplication, inaccuracies, and delays in reporting. In the context of madrasah education, EMIS becomes particularly crucial because these institutions operate under the Ministry of Religious Affairs, which emphasizes transparency and accountability in the distribution of resources, teacher management, and student enrollment. Without an effective data management system, madrasah often face challenges in aligning their reports with national standards, leading to difficulties in resource allocation and policy compliance. EMIS, therefore, offers a strategic solution to ensure that data from various Islamic schools, including State Islamic Junior High Schools

(MTsN), are systematically compiled and integrated into the national education system (Yusuf & Nugroho, 2020).

The implementation of EMIS in the Annual Compilation Program is vital for schools because it provides a structured framework to manage educational data on an annual basis. The program requires schools to gather, verify, and submit data related to students, teachers, infrastructure, and learning outcomes. At Palopo State Islamic Junior High School, this program not only ensures compliance with government regulations but also facilitates internal planning, monitoring, and evaluation of educational services. By maintaining consistent and updated data, schools are better equipped to respond to the dynamic needs of students, teachers, and the community, while at the same time strengthening institutional credibility. This demonstrates how EMIS is not only an administrative tool but also a driver of educational quality assurance (Rahman, 2019).

However, the implementation of EMIS in practice is not without challenges. Technical difficulties such as unstable internet access, limited availability of skilled operators, and insufficient training for staff often hinder the system's effectiveness. In rural or semi-urban areas such as Palopo, these issues can be more pronounced, potentially affecting the accuracy and timeliness of data submission. Moreover, changes in policy guidelines and updates to the EMIS platform require continuous adaptation, which can strain schools with limited resources. Addressing these obstacles is crucial, as ineffective implementation can undermine the reliability of educational data and weaken institutional accountability. Thus, while EMIS holds great potential for enhancing educational management, its success largely depends on the readiness and capacity of schools to adopt and sustain the system (Suryadi & Firmansyah, 2022).

At the same time, EMIS implementation has broader implications for governance and transparency within the education sector. Data generated through EMIS contributes to evidence-based policymaking at the regional and national levels, ensuring that resources are distributed equitably and according to actual needs. For schools like Palopo State Islamic Junior High School, the system strengthens accountability by making institutional data accessible for monitoring by authorities and stakeholders. This transparency builds public trust in educational institutions and enhances their role as centers of learning that are both responsive and accountable. Therefore, studying EMIS implementation in the Annual Compilation Program at Palopo State Islamic Junior High School provides valuable insights into how information systems shape educational governance at the micro and macro levels (Arifin & Wahyuni, 2021).

In this regard, the focus of the present study is to analyze the implementation of EMIS in the Annual Compilation Program at Palopo State Islamic Junior High School. By examining the processes, challenges, and impacts of EMIS, the research seeks to highlight both the strengths and weaknesses of the system in supporting educational management. Understanding these dynamics is crucial not only for improving the effectiveness of EMIS at the school level but also for informing policy decisions that affect Islamic education more broadly. Ultimately, the study contributes to the discourse on digital transformation in education, emphasizing the importance of effective information systems in ensuring sustainable improvements in educational quality and governance (Fauzi, 2023).

2. METHODS

This study employed a qualitative research method with a case study approach to explore the implementation of the Educational Management Information System (EMIS) in the Annual Compilation Program at Palopo State Islamic Junior High School. Data were collected through in-depth interviews with school administrators, EMIS operators, and teachers, as well as observations of the data management process and analysis of relevant documents such as school reports and government guidelines. The qualitative approach was chosen to gain a deeper understanding of the experiences, challenges, and strategies involved in utilizing EMIS at the school level. Data analysis was conducted using thematic analysis, which involved coding, categorizing, and interpreting patterns that emerged from the data to draw meaningful conclusions. To ensure credibility, the study applied triangulation by comparing

information obtained from different sources and methods, while maintaining ethical considerations such as informed consent and confidentiality of participants.

3. FINDINGS AND DISCUSSION

The Data Management Process of EMIS in Preparing the Annual Program at MTsN Palopo

The Educational Management Information System (EMIS) is a management information system developed by the Indonesian Ministry of Religious Affairs to systematically and integratively manage data on madrasah, Islamic boarding schools, and religious education. The implementation of EMIS in educational institutions includes processes such as data collection, input, validation, storage, utilization, and monitoring, all of which are technology-based to support decision-making and improve planning in preparing the annual program. Based on the researcher's interview findings, the data collection process at MTsN Palopo is carried out by EMIS operators. Data input requires authentic documents, such as student diplomas and family cards, which are crucial for grouping students (rombel), determining the total number of students, and categorizing by gender. Valid data become the foundation for planning resource allocation, including teaching hours, class ratios, and the calculation of BOS (School Operational Assistance) funds for the annual program. In managing and storing data, EMIS plays an essential role, as data on infrastructure, student numbers, and overall student demographics must remain accurate and updated. Operators conduct routine updates and tiered validation to ensure data reliability. This aligns with Charles' theory cited in Ramadina's journal, which describes EMIS as a system of organized information and documentation that involves collecting, storing, processing, analyzing, and disseminating data for educational planning and management (Ramadina, 2018).

Policy Implementation of EMIS in Preparing the Annual Program at MTsN Palopo

Policy can be understood as a systematic and planned sequence of actions designed to realize a program or initiative, ensuring that every step is interconnected and contributes to achieving the desired outcomes. The success of EMIS implementation does not merely rely on the availability of the system and human resources but also on the effectiveness of policy measures regarding organizational stages, interpretation, and application. Based on interview results, the planning of the annual program at MTsN Palopo is considered a crucial initial step in EMIS implementation. EMIS data significantly influences budgeting, student information, infrastructure, and institutional records. The organizational stage involves multiple stakeholders, including administrative staff, deputy heads for curriculum and student affairs, and the principal. To enhance the quality of human resources, MTsN Palopo regularly provides training and workshops, while the Ministry of Religious Affairs offers annual technical guidance. In the application stage, EMIS serves as the main instrument for monitoring and evaluating the school's annual program, focusing on accurate data collection. This is in line with Dessler's view that human resource management includes employee training and development to improve competencies and performance. In this context, the training and mentoring of EMIS operators by the Ministry is a strategic step to ensure successful implementation (Dessler, 2017).

Challenges in Implementing EMIS for Preparing the Annual Program at MTsN Palopo

In today's digital era, information and communication technology has become a critical component in various sectors, including education in Indonesia. Madrasah, as institutions combining general and religious education, face challenges in improving management and service quality. EMIS was introduced as a solution to simplify data management concerning students, infrastructure, budgets, administration, and learning processes. The success of EMIS implementation can be measured through the quality of the system, information, and services provided. However, challenges arise when one of these dimensions is not fulfilled, such as inaccurate data, frequent system disruptions, or inadequate support services. Based on interview findings, several challenges at MTsN Palopo include an excessive number of students, unreported student transfers, incomplete student records, mismatches with population registry (Dukcapil) data, and technical issues from the central office. To address these, the school engages in both internal and external communication to resolve data

discrepancies. This corresponds with Laudon's argument that management information systems must be capable of overcoming technical and administrative barriers to deliver accurate and timely information for effective educational planning (Laudon & Laudon, 2020).

The findings of this study reveal that the implementation of the EMIS in the Annual Compilation Program at MTsN Palopo plays a crucial role in ensuring data accuracy for planning and resource allocation. The processes of data collection, validation, and storage are conducted systematically, aligning with Charles' theory of management information systems as an integrated tool for documentation, analysis, and dissemination of educational data (Ramadina, 2018). This indicates that EMIS not only functions as a technical instrument but also as a strategic management tool that supports institutional planning. Similar findings were highlighted by Yusuf and Nugroho (2020), who argued that EMIS is essential for avoiding duplication and inaccuracy in reporting. In both studies, EMIS serves as a backbone for institutional credibility and compliance with national educational standards.

Furthermore, the study highlights the importance of organizational and policy stages in EMIS implementation, including the roles of school staff, administrative leaders, and the Ministry of Religious Affairs. The provision of training and technical assistance reflects Dessler's (2017) perspective on human resource development, emphasizing that capacity-building is central to organizational success. This resonates with Suryadi and Firmansyah (2022), who noted that continuous training and mentoring for EMIS operators improve system effectiveness and reduce errors in data reporting. The findings at MTsN Palopo reinforce the argument that the successful adoption of digital management systems depends heavily on the preparedness and competencies of human resources. Without adequate operator skills and institutional support, even advanced information systems may not yield optimal benefits.

Challenges identified in this research such as incomplete or inconsistent student data, unreported transfers, and technical disruptions from the central system echo problems documented in previous studies. Rahman (2019) reported that rural and semi-urban schools often encounter infrastructural and technical barriers that hinder EMIS performance, particularly related to internet connectivity and data synchronization. Similarly, Laudon and Laudon (2020) emphasize that management information systems must be designed to overcome technical and administrative barriers to maintain reliability and timeliness. The persistence of these issues suggests that while EMIS has improved data management in madrasah, structural and infrastructural limitations remain significant obstacles to achieving full system optimization.

From a theoretical perspective, the challenges observed at MTsN Palopo can also be analyzed through the lens of information system quality models, particularly DeLone and McLean's model of information systems success. According to this model, system quality, information quality, and service quality must interact to ensure overall effectiveness. The technical errors and data inconsistencies reported in this study reflect weaknesses in both system and service quality, which in turn affect user satisfaction and organizational impact. This aligns with the study's finding that frequent updates and central-level technical disruptions pose difficulties for school operators, thereby lowering the efficiency of data reporting processes.

At the governance level, EMIS implementation at MTsN Palopo demonstrates how digital information systems can strengthen transparency and accountability in education. The structured data collected through EMIS provides a foundation for evidence-based policymaking, both at the institutional and national levels. Arifin and Wahyuni (2021) similarly highlight that EMIS enhances institutional accountability by making data more accessible for external monitoring. This aspect is particularly important for madrasah under the Ministry of Religious Affairs, where resource distribution and student enrollment must be transparent and equitable. The case of MTsN Palopo thus reflects broader patterns of governance reform in Indonesian education, where digitalization is used as a mechanism for enhancing both efficiency and public trust.

Taken together, these findings suggest that while EMIS has successfully improved data management and accountability in MTsN Palopo, its effectiveness is constrained by technical

limitations and human resource challenges. Compared with previous studies, the results of this research confirm that the success of EMIS implementation lies not only in the availability of technological infrastructure but also in organizational readiness and continuous support from the Ministry. Theoretically, this aligns with models of information system adoption that emphasize the interplay between technology, people, and institutional structures. Thus, EMIS at MTsN Palopo illustrates both the potential and limitations of digital transformation in Islamic education, offering valuable lessons for policymakers and school administrators who aim to optimize information systems in similar contexts.

4. CONCLUSION

Based on the findings and data analysis regarding the implementation of the Educational Management Information System (EMIS) in the annual program planning at MTsN Palopo, it can be concluded that EMIS plays a crucial role in ensuring accurate and reliable data management. Data collection is carried out by EMIS operators using authentic documents such as diplomas and family cards, which are essential for determining class groups, student numbers, and gender distribution; this valid data underpins resource allocation, including lesson hours, class ratios, and BOS funding. The implementation policy of EMIS at MTsN Palopo involves three main stages organization, interpretation, and application where various stakeholders, including administrative staff, deputy principals, and the school principal, participate, supported by regular training and annual guidance from the Ministry of Religious Affairs to improve operator competence. In practice, EMIS serves as the primary instrument for monitoring and evaluating the annual program through the provision of accurate data. However, challenges remain, including technical and administrative issues such as excessive student numbers, unreported transfers, incomplete or inconsistent student data, discrepancies with civil registry data, and system-level constraints from the central authority.

REFERENCES

- Arifin, Z., & Wahyuni, R. (2021). The role of educational management information systems in improving transparency and accountability of Islamic schools. *Journal of Islamic Education Management*, 9(2), 145–158. <https://doi.org/10.21043/jiem.v9i2.8123>
- Fauzi, M. (2023). Digital transformation and the implementation of EMIS in Indonesian madrasah: Challenges and opportunities. *International Journal of Education and Information Technology*, 12(1), 33–47. <https://doi.org/10.11591/ijeit.v12i1.10921>
- Ministry of Religious Affairs. (2021). *Educational Management Information System (EMIS) guidelines for Islamic schools*. Jakarta: Directorate General of Islamic Education, Ministry of Religious Affairs of the Republic of Indonesia.
- Rahman, A. (2019). Annual data compilation in madrasah: The role of EMIS in educational planning. *Journal of Education Policy and Management*, 7(1), 88–101. <https://doi.org/10.24036/jepm.v7i1.235>
- Suryadi, H., & Firmansyah, D. (2022). Barriers to implementing EMIS in rural Islamic schools: A case study in Eastern Indonesia. *Indonesian Journal of Educational Technology*, 14(3), 201–217. <https://doi.org/10.17509/ijet.v14i3.29564>
- Yusuf, M., & Nugroho, B. (2020). Information systems and educational governance: The implementation of EMIS in Indonesian madrasah. *Journal of Information Systems in Education*, 5(2), 77–92. <https://doi.org/10.24815/jise.v5i2.17082>.
- Dessler, G. (2017). *Human resource management (15th ed.)*. Pearson Education.
- Laudon, K. C., & Laudon, J. P. (2020). *Management information systems: Managing the digital firm (16th ed.)*. Pearson Education.
- Ramadina, E. (2018). Educational Management Information System (EMIS) as a basis for school planning. *Journal of Education and Learning Research*, 5(2), 112–120. <https://doi.org/10.21043/jelr.v5i2.5231>