

The Role of Electronic Records Management Systems in Enhancing Accountability in Educational Institutions: Evidence from Indonesian Senior High Schools

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This study aims to explore how Electronic Records Management Systems (ERMS) can strengthen accountability in schools through three main objectives: analysing the role of ERMS in supporting school accountability, measuring the quality of ERMS based on user responses, and assessing the impact of ERMS use on archivist performance. Data were collected from 40 ERMS users and observations of 20 archivists. The results showed that ERMS has excellent quality in terms of reliability, information quality, service, objectivity, user satisfaction, and net benefits. Analysis of document availability based on eight national education standards revealed a high level of document availability and completeness, which supports school accountability. ERMS has been shown to improve the efficiency and accuracy of archivists' work and their ability to find documents in less than a minute. The study concludes that ERMS is a very valuable tool in supporting user tasks, strengthening accountability and transparency in education management.

Keywords: electronic records management systems, school accountability, document management, information system quality, archivist work efficiency, Indonesia

1. Introduction

Advancements in Information and Communication Technology (ICT), especially the Internet, have triggered significant digital transformations in various sectors, including educational administration. This digitalization includes major changes in the way records are managed, from creation to storage, which was previously done manually with paper records. Today, electronic records have replaced these old methods, introducing new, more efficient and organized ways of managing information (Meru & Kinoti, 2022; Newa & Mwantimwa, 2019). The application of ICT in records management not only increases accessibility and efficiency, but also has a profound impact on the administrative system in the education sector.

Even though the implementation of electronic records has grown, most archiving practices in many Indonesian schools and universities are still done manually. These traditional records management systems often face

various problems such as limited accessibility, the possibility of errors, and the risk of data loss. This reliance on manual methods hinders schools' ability to achieve effective accountability, which is critical in ensuring that resources are managed well and policies are implemented according to established standards (Guffin, 2020; Wamukoya & Mutula, 2005; Issa & Wamukoya, 2018; Setyawan, Sugiyono & Yuliana, 2024). Paper-based record management is still widely used, especially for maintaining legacy documents due to their physical authenticity. However, this approach is increasingly seen as unsustainable and inefficient.

Accountability is a fundamental element in management and public policy, including in the educational context. Accountability is important for various reasons, including accreditation assessments determined by accreditation agencies. Thus, accountable institutions can provide evidence of performance that has been carried out during the assessment period. Macheridis and Paulsson (2021) argue that accountability is emerging as a strengthened requirement in two areas of education: quality assurance systems inspired by new public management, especially evaluation and accreditation; and performance measurement, including financial evaluation and assessment. Carey (2007) argues that external accreditation as a source of accountability can be very close to self-accountability because it is a process of internal and external learning and review.

Cochran-Smith (2021) states that accountability has long been considered a powerful policy tool for improving the quality of education, including in terms of accreditation requirements. Hoffman (2013) also affirms that implementing accountability and accreditation will provide better added value and innovation capacity to respond to global challenges. Therefore, accountability will always be closely attached to the accreditation of educational institutions, as various pieces of information and evidence are needed to measure institutional performance during accreditation assessments.

However, without the support of modern technology such as Electronic Records Management Systems (ERMS), achieving effective accountability becomes a major challenge. Although ERMS are necessary for organizations to improve their performance, many organizations have not started their implementation, while some others try to implement them without a proper model, thereby leading to ineffective and erroneous implementation (Mukred et al., 2022). Manual document management systems are often inadequate to ensure the transparency and accuracy required for good accountability (Bovens, 2007).

To address these issues, ERMS offer significant solutions. By using ERMS, schools can gain benefits such as faster and easier access to doc-

uments, reduced risk of errors and data loss. In addition, ERMS provides better tracking and monitoring features, as well as a clear and measurable audit trail, which can increase transparency in records management (Wahid et al., 2022). Implementation of this system has the potential to improve accountability by providing a consistent and integrated platform for document management.

In support of this, Brooks, Yeadon-Lee and Gill (2024) state that computational archival science has become an urgent necessity and should be included in educational curricula to equip graduates with the skills necessary for handling, analysing, preserving, and accessing digital archives using relevant technologies. The importance of ERMS also appears in sensitive fields like health care, where digital archiving systems are critical for protecting patient privacy and data security (Jakhar et al., 2024). However, in many developing countries like South Africa, challenges such as lack of skills, management support, resources, and legislative frameworks still hamper effective implementation. Matlala and Ncube (2024) found that although electronic records are vital for service delivery, current record management programs are inefficient, ineffective, and do not comply with legal standards.

Given the increasing importance of digital archiving, continuous testing of ERMS security and accuracy is being conducted using various software tools (Shekgola & Ngoepe, 2025). Meanwhile, empirical studies on archival practices in higher education are still rare in developing countries, making field-based assessments necessary (Bajwa & Rafiq, 2023). Archives and records are important resources for individuals, organizations, and states. Academic records are created and maintained to support effective functioning of educational and corporate institutions (Moid et al., 2024). Digital transformation of paper-based records is also recognized for contributing to sustainable development by reducing paper use and thus supporting environmental conservation (Bravo et al., 2025).

Standardization is also essential in this digital transformation. According to Katuu (2024), standardization aims to establish consistent rules that ensure uniformity across time and jurisdictions through mutual agreement. This consistency is critical for interoperability and compliance. The vital role of technology advancement in society has consistently emerged in the education sector. Digital records management is becoming the transitional path for delivering content, materials, and institutional data for educational purposes (Huda et al., 2023).

Based on these considerations, we see that Semarang City is a strategic research location to represent the Central Java province. Central Java has

a total of 868 public and private high schools, with Semarang City having the highest concentration of 72 schools and a school population of around 31,289 individuals. This generates a large volume of both personal and institutional documents, demanding transparent and accountable record management practices. Therefore, although our sample of 40 archivists may seem limited, they were selected purposively based on their direct involvement in archival management in a complex archival environment. This gives the study strong contextual depth, even with limited generalizability, and provides a basis for further extended and longitudinal research. This article aims to explore how ERMS can strengthen accountability in schools through three main objectives. First, we will analyse the role of ERMS in supporting school accountability, focusing on how this technology improves archiving and document management processes. Second, this article will measure the quality of the ERMS that has been developed by evaluating user responses as the main indicator of the quality of the system. Third, we will assess the impact of using an ERMS on the performance of archivists by comparing their performance before and after implementing the system. This performance measurement is important to assess the effectiveness of ERMS in providing documents as evidence of accountability.

2. Literature Review

2.1. Educational Accountability in Indonesia

Educational accountability in Indonesia is a crucial issue that continues to attract attention from various stakeholders. It refers to the responsibility of educational institutions to report their performance and outcomes to the government, parents, and the broader community. In response, the government has introduced several policies, such as national education standards and teacher performance assessments to enhance transparency and accountability in the education sector.

Despite these efforts, the practical implementation of educational accountability still faces significant challenges. These include a lack of transparency and information openness in many schools (Androniceanu, 2021; Ramirez-Montoya, 2020), as well as limitations in the capacity and competence of educational personnel (Saniuk, Caganova & Saniuk, 2023).

In this context, technological integration is seen as a critical solution. The current study views the adoption of Electronic Records Management

Systems (ERMS) as a strategic approach to overcoming these challenges, as mentioned by Mukred and colleagues (2019). ERMS can facilitate structured documentation, efficient data management, and real-time reporting, which are essential for ensuring accountability. As Davies and West (2013) argue, school management information systems based on technology can enhance the speed and accuracy of reporting processes. This study specifically investigates how ERMS supports the documentation needed to provide evidence of school accountability.

2.2. ERMS Concept to Support School Administration

Electronic Record Management Systems (ERMS) is an increasingly important concept in supporting school administration. ERMS is a system used to manage and store various types of documents and data electronically, which allows more efficient and structured access to and management of information. In the context of school administration, ERMS can be used to manage student data, academic records, financial documents, and various other types of reports (Bravo, Nistor & Ramírez, 2021; Saputra, 2020).

The use of ERMS in school administration provides various benefits. One of the main benefits is increased operational efficiency, where administrative processes can be carried out more quickly and with a lower error rate (Mohamed et al., 2022). Apart from that, ERMS also allows for safer and more protected data storage, reducing the risk of loss or damage to physical documents (Hopkin, 2018). Implementing ERMS can also support transparency and accountability in school administration. With this system, all data and information can be accessed and monitored by authorized parties more easily, thereby enabling better monitoring of administrative performance. Apart from that, ERMS also makes the audit and assessment process easier, because all documents and data are well structured and documented (Kiu et al., 2024).

2.3. ERMS to Support School Accountability

Electronic Record Management Systems also play an important role in supporting school accountability. With ERMS, schools can manage and store all documents and data related to performance and administration electronically, which simplifies the reporting and evaluation process (Oktarina et al., 2023). This is essential for ensuring that schools can provide accurate and transparent reports to interested parties.

One of the main advantages of ERMS in the context of accountability is its ability to increase transparency. With this system, all data and information can be accessed in real-time by authorized parties, making it easier to monitor and assess performance (Ngcobo et al., 2024). Apart from that, ERMS also allows for more secure and structured data storage, reducing the risk of data manipulation or loss (Bravo, Nistor & Ramírez, 2021). Apart from that, ERMS also facilitates the audit and inspection process by external parties. With all documents and data stored electronically, the audit process can be carried out more quickly and efficiently. This also helps in identifying areas that need to be repaired or improved, so that schools can continue to make improvements and improve quality on an ongoing basis (Wahid et al., 2022). Ultimately, implementing ERMS to support school accountability requires commitment from all parties, including school management, teachers and administrative staff (Mohamed et al., 2022). Adequate technological support and continuous training for all system users are also very important to ensure that ERMS can function optimally in increasing school accountability (Mahama, 2017).

3. Methodology

Mixed qualitative and quantitative methods were applied in this research. Mixed methods research is an approach that combines quantitative and qualitative research methods in the same research investigation. Such work can help develop rich insights into a variety of interesting phenomena that cannot be fully understood using only quantitative or qualitative methods (Venkatesh, Brown & Bala, 2013). Qualitative methods are applied to answer RQ1 and RQ3, while quality is determined in RQ2 through questionnaire analysis. An analysis of the interaction between quantitative and qualitative methodologies in mixed methods research pays attention to the differences in meanings commonly used to describe description, combination, and integration. These interactions are analysed in the context of the phases that occur before the results and their interpretation.

3.1. Participants

This study involved 40 archivists (27 women and 13 men) from both public and private senior high schools in Semarang City, Central Java. Participants were selected using purposive sampling, a method appropriate for qualitative inquiry as outlined by Patton (2014). Semarang was chosen

as the study site because it has the highest concentration of senior high schools in Central Java: 72 out of a total of 868, serving approximately 31,289 students and staff. The volume and diversity of records generated in this context, including both personal and institutional documents, present complex archival challenges. Despite the relatively small sample size, the strategic selection of participants in a city with high archival demands offers meaningful contextual insights. This focused approach allows for an in-depth examination of electronic records management system (ERMS) implementation within a representative urban educational setting and provides a valuable foundation for future research with broader or longitudinal scopes.

Sampling was carried out using the purposive sampling method, which is commonly applied in qualitative research to select information-rich cases that are especially relevant to the research objectives (Patton, 2014). In this study, participants were selected based on specific inclusion criteria to ensure relevance and expertise. These criteria included:

- 1) individuals currently serving as archivists or personnel responsible for managing school records;
- 2) having a minimum of one year of experience in archival duties within a high school setting;
- 3) representing a diverse range of institutions, including both public and private senior high schools.

The selection aimed to capture variations in archival practices and challenges across different administrative and organizational contexts. By focusing on individuals directly engaged in record management activities, the study sought to obtain deep, contextually grounded insights into the implementation of ERMS in the education sector.

3.2. Data Collection

Data was collected using three main techniques: interviews, questionnaires, and observation. Interviews were used as the main data source to capture phenomena in the field, conducted with 20 archivists in several schools. Questionnaires were distributed to 40 archivists to assess the quality of the existing archiving system. Observations were carried out randomly on 20 archivists to understand changes in their performance patterns. The data obtained is summarized in research results, which are considered representative for all participants.

Data analysis was carried out using the analysis model developed by Miles and Huberman (1984), which consists of three stages: data reduction, data display, and conclusion drawing or verification. In addition, the data in this research has undergone a triangulation process to increase the credibility and validity of the findings. Triangulation aims to reduce, eliminate, or compensate for the weaknesses of a single strategy, thereby increasing the interpretability of findings (Thurmond, 2001).

3.3. Instruments

In this study, we used three main measurement approaches to evaluate various aspects of the ERMS. These approaches are designed to provide a comprehensive picture of system effectiveness from various perspectives, including the quality of the system itself, its support for accountability, and its impact on archivist performance.

First, we assessed the quality of the ERMS from the user's perspective. For this purpose, we adopted instruments that have been developed by several leading researchers, including DeLone and McLean (1992; 2003) and Lutfi (2023). This instrument allows us to evaluate various dimensions of system quality such as reliability, usability, and user satisfaction. We also paid attention to aspects of validity and reliability in measurements to ensure that the assessments we carry out are accurate and consistent.

Second, we measured ERMS support for accountability. Based on the views of Königstorfer and Thalmann (2022) and Bennett and Hatfield (2012), good documentation is an important source of audit evidence and serves as a tool to ensure accountability. The instruments used in this measurement were adapted from Cavalluzzo and Ittner (2003), Akbar et al. (2012), and Wang (2002), with special adjustments for the Indonesian context. This measurement aims to evaluate how well the ERMS supports the audit process and organizational transparency.

Third, we analysed the performance of archivists by comparing conditions before and after using ERMS. This measurement focuses on speed and accuracy in retrieving the required archives, in accordance with the theory proposed by Gie (2000). This evaluation helps us to understand how ERMS affects archivists' work efficiency in terms of searching and managing records.

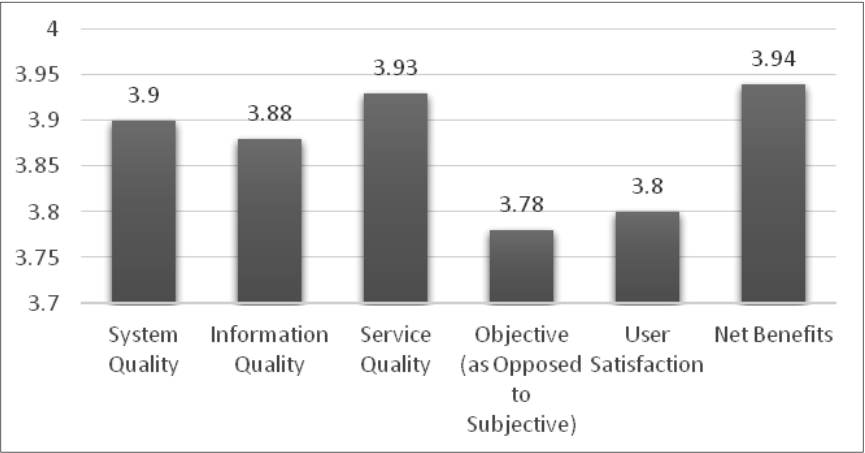
4. Results and Discussion

4.1. Results

The results of this research are described in accordance with the research objectives. First, we analysed questionnaires distributed to 40 archivists to get a direct assessment of the quality of the ERMS from the user's perspective. This assessment aims to evaluate the extent to which the existing system meets the needs and expectations of users in managing records electronically. Respondents were asked to rate various aspects of the system, including ease of use, reliability, and operational efficiency. The data obtained from this questionnaire provides an initial picture of user assessments of ERMS quality, as well as areas that require further improvement.

Practitioners are advised to implement a success measurement program that includes six dimensions of Information Systems (IS) success: System Quality, Information Quality, Service Quality, Objective (as opposed to Subjective), User Satisfaction, and Net Benefits. In the context of this research, assessing the quality of ERMS does not only look at the technical aspect, but also the impact it produces on individual and organizational performance as a whole. System Quality includes aspects such as reliability, usability, and efficiency. Information Quality assesses how accurate, relevant, and timely the information produced by the system is. User Usage and Satisfaction reflect how frequently and satisfactorily the system is used, while individual and organizational impact assesses the positive changes the system produces on performance and productivity. We present the results of the questionnaire analysis below.

Figure 1: Analysis of ERMS quality according to user perspective



Source: Authors.

Table 1: Analysis of ERMS quality according to user perspective

Measurements	Description
System Quality	Users recognize that ERMS has high system quality. It covers aspects such as reliability, ease of use, and overall performance of the system.
Information Quality	Users admit that the quality of information produced by ERMS is very good. This includes accuracy, relevance, completeness, and ease of understanding the information provided by the system.
Service Quality	Users acknowledge that ERMS provides excellent service quality and meets their needs. This includes technical support, responsiveness and service availability.
Objective (as Opposed to Subjective)	Users feel that ERMS provides an objective assessment to use. This means that this system is assessed based on clear data and facts, not based on subjective opinions or perceptions.
User Satisfaction	Users feel that ERMS provides adequate satisfaction. This includes satisfaction with the features, usability, and results obtained from using the system.
Net Benefits	Users experience significant benefits from using ERMS. This includes increased efficiency, productivity, and other benefits derived from the system.

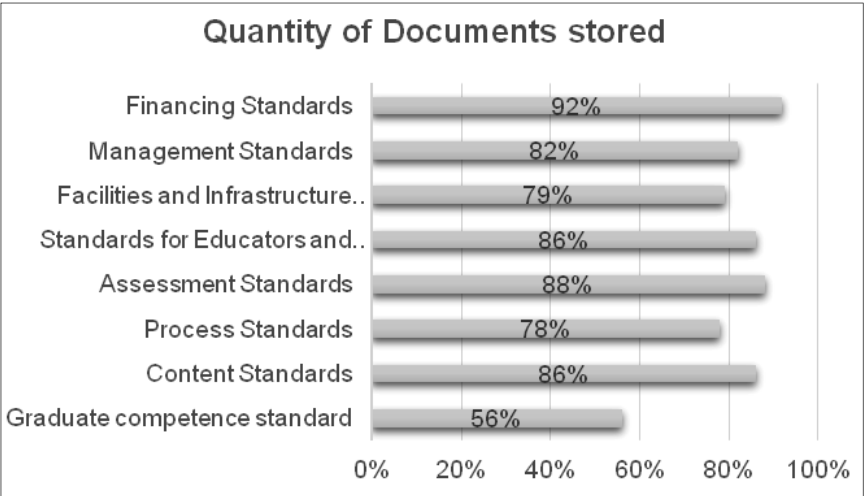
Source: Authors.

Based on Figure 1, it was found that measurements from 40 ERMS users showed that this system had very good quality in various important aspects. System Quality received an average score of 3.90, indicating that users highly value the system's reliability, ease of use, and overall performance. Information Quality was also rated high with an average of 3.88, reflecting that users feel that the information provided by ERMS is accurate, relevant, complete and easy to understand. Furthermore, Service Quality received an average score of 3.93, indicating that the service provided by the ERMS support team is very satisfying and in accordance with user needs. The Objective aspect of ERMS received an average score of 3.78, indicating that users feel this system provides objective assessments based on clear data and facts. In terms of User Satisfaction, ERMS received an average score of 3.80, which indicates a fairly high level of user satisfaction regarding the features, usability and results obtained from the system. Lastly, Net Benefits from using ERMS received the highest score with an average of 3.94, reflecting that users experience significant benefits, including increased efficiency and productivity. Overall, these data show that ERMS successfully meet and even exceed user expectations in various aspects of performance and quality, making them an invaluable tool in supporting user tasks and goals.

Next, we attempted to analyse the availability of documents kept by schools based on eight national education standards in Indonesia, which resulted in several important findings. Our analysis corroborates the views of Königstorfer and Thalmann (2022) and Bennett and Hatfield (2012), which emphasize that good documentation is an important source of audit evidence and serves as a tool to ensure accountability. The instrument used in this measurement was adapted from research by Cavalluzzo and Ittner (2003) and Akbar, Pilcher and Perrin (2012), with special adjustments for the Indonesian context.

The purpose of this measurement is to evaluate how well the ERMS support the audit process and organizational transparency. Results show that ERMS play an important role in document storage and management, which in turn supports accountability and ensures that national education standards are met. ERMS support to the audit process not only helps in providing the necessary evidence, but also increases the overall transparency of the organization, which is a crucial aspect in educational management. The results are presented in the table below.

Figure 2: *Analysis of Document Availability in ERMS*



Source: Authors.

Our analysis of document availability based on eight national education standards in Indonesia shows variations in the level of availability and completeness that supports school accountability. The Graduate Competency Standards have 56% of the documents available but are incomplete, indicating a need for improvement. Content Standards (86%) and Standards for Educators and Education Personnel (86%) have very complete documents, ensuring good curriculum and teaching staff management. Process Standards (78%) and Facilities and Infrastructure Standards (79%) have complete documents, support the learning process and adequate facilities. Assessment Standards (88%), Management Standards (82%), and Financing Standards (92%) have very complete documents, enabling accurate student evaluation, good school management, and transparent financial management. Overall, high document availability in most standards indicates that the school has a good documentation system, supporting accountability, transparency, and enabling an effective audit process.

Finally, we observed 20 school archivists. The purpose of this measurement is to evaluate the speed and accuracy in rediscovering the required archives, in accordance with the theory proposed by Gie (2000). This evaluation helps us understand how ERMS affect archivists' work efficiency in searching and managing records.

Good documentation is an important source of audit evidence and thus a tool for ensuring accountability. By measuring the work efficiency of archivists through ERMS, we can assess the extent to which this system supports accurate and fast records recording and tracking, which ultimately contributes to school transparency and accountability.

Table 2: *Analysis of Archivists performance using ERMS*

Performance	Results Analysis
Timeliness	20 archivists were tested, and all were able to retrieve the required digital records in less than one minute, demonstrating high efficiency in archive search using the ERMS.
Accuracy	18 out of 20 archivists successfully identified and corrected at least two intentional filing errors or document mix-ups, indicating a high level of precision in record retrieval and error detection.

Source: Authors.

Table 2 shows the results of the analysis, which indicates that of the 20 archive officers, all were able to find the required archives in less than one minute, showing very high speed. In terms of accuracy, 18 out of 20 archive officers were able to find the archives correctly, while two officers made mistakes or were confused. Good documentation is an important source of audit evidence and thus a tool for ensuring accountability. By measuring the work efficiency of archivists through ERMS, we can assess the extent to which this system supports accurate and fast record recording and tracking, which ultimately contributes to school transparency and accountability.

4.2. Discussion

This study offers meaningful theoretical and practical contributions to understanding how ERMS reinforce accountability frameworks in the education sector, particularly within schools. The findings confirm that ERMS demonstrate high quality across several dimensions: system reliability, information accuracy, service responsiveness, objectivity, user satisfaction, and perceived net benefits. These align with the DeLone and McLean (1992; 2003) Information System Success Model, which suggests that information system success is driven by the quality of the system, the information it generates, and the services provided to users.

Building on this model, the study adopts a user-centred perspective as emphasized by Lutfi (2023), acknowledging that in public sector institutions like schools, system success is measured not just by technical performance, but also by its ability to enhance institutional governance, documentation integrity, and user empowerment. In this sense, ERMS function as more than an administrative tool; they become strategic mechanisms that embed accountability into everyday school operations.

Empirical evidence from the study illustrates that ERMS implementation significantly supports compliance with Indonesia's Eight National Education Standards (*Standar Nasional Pendidikan, SNP*), particularly in areas such as Content Standards, Teacher and Education Personnel, Assessment, Management, and Funding. The consistent availability and completeness of relevant documents indicate that ERMS promote structured documentation, thereby strengthening institutional accountability. These findings are consistent with Cavalluzzo and Ittner's (2003) argument that accurate documentation forms the backbone of transparency and accountability in public organisations.

Operationally, ERMS enhance the efficiency of archival management. Observations involving 20 school archivists show improvements in the speed and accuracy of document retrieval and storage. This leads to increased administrative productivity and better support for decision-making. Gie (2000) has long emphasized that efficient records management is key to institutional transparency and service delivery. In schools, which are frequently audited and monitored, these capabilities are vital for enabling real-time access to data, supporting internal evaluations, and responding promptly to external oversight requirements.

Moreover, accountability remains a central pillar in educational management and policy. Accreditation bodies and regulators require institutions to provide evidence of performance over time (Chisita & Tsabedze, 2021). Macheridis and Paulsson (2021) identify accountability as essential in two key areas: quality assurance systems based on new public management principles, and performance measurement, including financial and learning outcomes. Carey (2007) suggests that external accountability processes such as accreditation often mirror internal accountability mechanisms, while Cochran-Smith (2021) views accountability as a longstanding and powerful tool for enhancing education quality.

Crucially, ERMS also serve as enablers of governance legitimacy, with digital records functioning not just as administrative outputs, but as reliable audit trails. This supports the work of Bennett and Hatfield (2012), who highlight how well-maintained documentation fosters public trust in

organisational processes and strengthens mechanisms for monitoring and evaluation. In the school context, this translates to greater credibility during inspections and more transparent engagement with stakeholders. In addition to institutional impacts, the adoption of ERMS produces clear operational benefits. It enables centralized document storage, reduces redundancy, prevents data loss, and streamlines routine workflows. These efficiencies allow staff to reallocate time and resources towards teaching and student learning. ERMS also equip school leaders with actionable data, promoting evidence-based decision-making and policy implementation.

While the study focuses on internal system success, it is equally important to consider external environmental factors that influence ERMS adoption and sustainability. These include regulatory mandates, government funding, technical infrastructure, professional development policies, and support from local education authorities. For instance, the availability of internet connectivity, IT personnel, and consistent training can significantly shape the effectiveness of ERMS in rural versus urban schools. Moreover, external pressure from accreditation bodies and education ministries acts as both a motivator and benchmark for ERMS compliance and performance.

The long-term impact of ERMS also warrants greater attention. Beyond immediate operational efficiency, ERMS have the potential to transform school management practices over time. They enable longitudinal data collection, trend analysis, and institutional learning. As schools accumulate digital records, they build an organisational memory that can inform strategic planning, curriculum improvements, and responsiveness to emerging educational needs. Furthermore, over the long term, ERMS can enhance resilience by enabling institutions to adapt more swiftly to crises such as the COVID-19 pandemic, when remote access to documents becomes essential.

From a policy standpoint, these insights advocate for integrating ERMS within broader national digital education strategies. Ministries of Education and local governments can leverage ERMS as part of a comprehensive Monitoring and Evaluation (M&E) system that enhances transparency, strengthens governance, and supports the achievement of education-related Sustainable Development Goals (SDGs), particularly SDG 16 on strong institutions.

Our study contributes to the literature on information system success by showing that the effectiveness of systems like ERMS is realised when they:

(1) improve managerial efficiency; (2) support accountability through robust documentation; (3) facilitate compliance with regulatory standards; (4) are supported by enabling external factors; and (5) generate sustainable, long-term benefits for school governance. These findings reinforce the relevance of data-driven governance and digital transformation in education (Königstorfer & Thalmann, 2022; Akbar, Pilcher & Perrin, 2012). As such, ERMS should be viewed not only as a tool for record-keeping but as a catalyst for institutional strengthening and policy innovation.

5. Conclusion

This research successfully explores how ERMS can strengthen accountability in schools through three main objectives. First, the analysis shows that ERMS significantly improve the archiving and document management process, which is supported by the results of observations of 20 archivists. Second, the quality of the ERMS is assessed as very good based on user responses, which include system reliability, information quality, services provided, objectivity, user satisfaction and net benefits obtained. Third, the impact of using ERMS on archivist performance shows increased efficiency and accuracy, with most archivists being able to find documents quickly and precisely, which supports the school audit and accountability process.

Based on these findings, we recommend that schools continue to adopt and optimize the use of ERMS to improve document management and accountability. Ongoing training for archivists is required to ensure that they can make maximum use of this system. Additionally, regular evaluations of system performance and user satisfaction should be conducted to identify areas requiring improvement. Further research could focus on the long-term impact of ERMS use on school academic and operational performance, as well as further exploration of the integration of these systems with other educational technologies.

The primary strength of this study lies in its provision of strong empirical evidence on the role of Electronic Records Management Systems (ERMS) in enhancing institutional accountability in Indonesian secondary schools. The research employs a multidimensional evaluation framework based on the DeLone and McLean's (1992; 2003) Information System Success Model, measuring system quality, information quality, service responsiveness, objectivity, user satisfaction, and net benefits. This comprehensive

approach enables the study to offer insights into both technical performance and administrative impact. Notably, the study addresses a novel area of inquiry by evaluating document availability in alignment with Indonesia's *Standar Nasional Pendidikan* (SNP), a regulatory framework that is unique to the Indonesian education system. To date, very few empirical studies have examined the relationship between ERMS and compliance with the SNP. This contextual focus enhances the originality of the research and fills a significant gap in both domestic and international literature, where analyses of ERMS applications have typically overlooked localized education quality standards such as SNP. Furthermore, the integration of document-based performance metrics with user-centred system evaluations contributes to both scholarly advancement and practical policy recommendations in the field of digital education governance.

Despite its contributions, this study has several limitations. First, it only covers senior high schools in Semarang City, which, although recognized for having the highest concentration of such schools in Central Java, limits the generalizability of the findings to other regions with different contextual characteristics. Second, the sample size comprising 40 purposively selected archivists offers depth but not broad representation, which may not fully capture the diversity of archival practices across various institutional types and geographic areas. Third, the study's mixed-method approach, while providing rich data, remains exploratory in nature and depends significantly on subjective user perceptions. Fourth, the research does not comprehensively examine the influence of external organizational factors, such as institutional support, regulatory enforcement, or professional development policies, which may play a critical role in the successful implementation and sustainability of ERMS. These limitations suggest the need for future studies employing larger, more diverse samples across multiple regions and incorporating more objective performance indicators to further validate and expand the findings presented here.

Future research should expand the geographic scope and sample size to enhance representativeness. Employing advanced quantitative methods such as SEM or PLS can strengthen the analysis of variable relationships. Additionally, studies grounded in the TOE (Technology-Organization-Environment) framework could explore the role of external factors in ERMS success. Longitudinal research is also recommended to assess the long-term impact of ERMS on accountability and archivist performance in the education sector.

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THE ROLE OF ELECTRONIC RECORDS MANAGEMENT SYSTEMS IN ENHANCING ACCOUNTABILITY IN EDUCATIONAL INSTITUTIONS: EVIDENCE FROM INDONESIAN SENIOR HIGH SCHOOLS

Summary

This paper aims to explore how Electronic Records Management Systems (ERMS) can strengthen accountability in schools. We have three main objectives: analysing the role of ERMS in supporting school accountability, measuring the quality of ERMS based on user responses, and assessing the impact of ERMS use on archivist performance. Data were collected from 40 ERMS users and observations of 20 archivists. The results showed that ERMS has excellent quality in terms of reliability, information quality, service, objectivity, user satisfaction, and net benefits. Analysis of document availability based on eight national education standards revealed a high level of document availability and completeness, which supports school accountability. ERMS has been shown to improve the efficiency and accuracy of archivists' work, where the majority of archivists are able to find documents in less than a minute. The study concluded that ERMS are a very valuable tool in supporting user tasks, strengthening accountability, and transparency in education management. The study also recommends that schools continue to adopt and optimize the use of ERMS to improve document management and accountability. Continuous training for archivists is needed so that they can utilize these systems optimally. In addition, periodic evaluation of system performance and user satisfaction is needed to identify areas for improvement. Further research is recommended to explore the long-term impact of ERMS use on school academic and operational performance, as well as the integration of these systems with other educational technologies.

Keywords: *electronic records management systems, school accountability, document management, information system quality, archivist work efficiency, Indonesia*

ULOGA ELEKTRONIČKOG UPRAVLJANJA ZAPISIMA U PODIZANJU ODGOVORNOSTI U OBRAZOVNIM INSTITUCIJAMA: PRIMJERI IZ INDONEZIJSKIH SREDNJIH ŠKOLA

Sažetak

U ovom radu želimo istražiti kako elektronički sustavi za upravljanje zapisima (ESUZ) mogu ojačati odgovornost u školama. Imamo tri glavna cilja: analizirati ulogu ESUZ-a u podršci odgovornosti u školama, izmjeriti kvalitetu ESUZ-a na temelju odgovora korisnika i procijeniti utjecaj korištenja ESUZ-a na radni učinak arhivista. Istraživački podaci prikupljeni su od 40 korisnika ESUZ-a i opažanja 20 arhivista. Rezultati pokazuju da ESUZ posjeduje iznimnu kvalitetu u smislu pouzdanosti, kvalitete informacija, usluge, objektivnosti i zadovoljstva korisnika. Analiza dostupnosti dokumenata na temelju osam nacionalnih obrazovnih standarda otkrila je visoku razinu dostupnosti i potpunosti dokumenata što jača odgovornost škola. Pokazalo se da ESUZ poboljšava učinkovitost i točnost rada arhivista te većina arhivista može pronaći potrebne dokumente za manje od minute. Studija zaključuje da je ESUZ vrlo dragocjen alat za podršku korisničkim zadacima te za jačanje odgovornosti i transparentnosti u obrazovnom menadžmentu. Studija također preporučuje da škole nastave usvajati i optimizirati korištenje ESUZ-a kako bi poboljšale upravljanje službenim zapisima i dokumentima te osnažile odgovornost. Potrebna je kontinuirana obuka arhivista kako bi mogli optimalno koristiti ovaj sustav. Osim toga, potrebna je periodična evaluacija karakteristika sustava i zadovoljstva korisnika kako bi se utvrdila područja za poboljšanje. Preporučuje se daljnje istraživanje kako bi se istražio dugoročni utjecaj korištenja ESUZ-a na akademsku i provedbenu izvedbu škola, kao i integracija ovih sustava s drugim tehnologijama u sustavu obrazovanja.

Ključne riječi: elektroničko upravljanje zapisima, odgovornost škola, kvaliteta informacijskih sustava, radna učinkovitost arhivista, Indonezija