

From Manual to Modern: Integrating e-Budgeting and e-Reporting for Efficient School Fund Management

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Abstract:

This research aims to develop an integrated e-Budgeting and e-Reporting system for managing BOS funds at schools. The study's background highlights the persistent challenges in manual management of BOS funds, including reporting delays, data inconsistencies, and administrative errors. These inefficiencies emphasize the need for a digital solution that integrates budgeting, reporting, and monitoring functions. The research method employed a Research and Development (R&D) approach, using needs analysis, system design, prototype development, expert validation, and limited field testing. The results indicate that the system achieved a feasibility score of 3.52/4 (88.8%), categorized as highly feasible with minor revisions. Limited field testing yielded an average score of 3.68/4, with reporting time efficiency improving by approximately 40% and administrative errors reduced through automated validation features. The developed system effectively integrates budgeting and reporting processes into a single platform, enhancing data accuracy, transparency, and efficiency. This study contributes to the field of digital financial governance in education and provides practical insights for implementing integrated digital systems in resource-constrained schools. Future research could explore the system's long-term impacts and scalability across diverse educational settings.

Keywords: *E-Budgeting, E-Reporting, Bos Funds, Digital Financial Governance, System Integration*

Abstrak:

Penelitian ini bertujuan untuk mengembangkan sistem e-Budgeting dan e-Reporting yang terintegrasi untuk pengelolaan dana BOS di sekolah. Latar belakang penelitian ini menyoroti tantangan terus-menerus yang dihadapi dalam pengelolaan dana BOS secara manual, seperti keterlambatan pelaporan, inkonsistensi data, dan kesalahan administrasi. Inefisiensi ini menekankan perlunya solusi digital yang mengintegrasikan fungsi penganggaran, pelaporan, dan pemantauan. Metode penelitian menggunakan pendekatan Penelitian dan Pengembangan (R&D), menggunakan analisis kebutuhan, desain sistem, pengembangan prototipe, validasi ahli, dan pengujian lapangan terbatas. Hasil penelitian menunjukkan bahwa sistem tersebut mencapai skor kelayakan 3,52/4 (88,8%), dikategorikan sangat layak dengan revisi kecil. Pengujian lapangan terbatas menghasilkan skor rata-rata 3,68/4, dengan efisiensi waktu pelaporan meningkat sekitar 40% dan kesalahan administratif berkurang melalui fitur validasi otomatis. Sistem yang dikembangkan secara efektif mengintegrasikan proses penganggaran dan pelaporan ke dalam satu platform, meningkatkan akurasi, transparansi, dan efisiensi data. Studi ini berkontribusi pada bidang tata kelola keuangan digital dalam pendidikan dan memberikan wawasan praktis untuk menerapkan sistem digital terintegrasi di sekolah yang terbatas sumber daya. Penelitian masa depan dapat mengeksplorasi dampak jangka panjang dan skalabilitas sistem di berbagai pengaturan pendidikan.

Kunci: *E-Budgeting, E-Reporting, Dana Bos, Tata Kelola Keuangan Digital, Integrasi Sistem*

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INTRODUCTION

Digital transformation in the public sector, particularly in education, is crucial for enhancing transparency, accountability, and efficiency in financial management. In Indonesia, the digitalisation of school financial management, especially for School Operational Assistance (BOS) funds, is key to improving accountability for the utilisation of public funds. However, empirical evidence indicates that BOS fund management still faces several challenges, including delays in reporting, inconsistencies between budget plans and actual expenditures, and errors in financial documentation (Astuti & Hanif, 2025; Setiyono et al., 2025). These issues hinder financial accountability and increase the risk of mismanagement. Digital tools such as e-budgeting and e-reporting have been identified as vital solutions, enabling better tracking, improved financial reporting, and more transparent financial processes. Bambang Subiyanto et al. (2023) suggest that e-budgeting and e-reporting can enhance transparency by providing accurate and timely data, while also improving system-based monitoring and evaluation (Arvaresa & Oktaviannur, 2026; Kannapadang et al., 2025). These technological advancements are necessary to improve the quality of financial governance in educational institutions.

BOS fund management in Indonesia has long been plagued by administrative issues that hinder its effectiveness. Audit findings frequently identify problems such as incomplete financial documentation, discrepancies between budgeted and actual expenditures, and delays in reporting, all of which undermine the transparency and accountability of the funds. These issues are not only problematic for financial governance but also jeopardise the efficient use of public resources allocated to education. The failure to adopt comprehensive digital systems that integrate various aspects of financial management has contributed to these persistent challenges. According to Astuti & Hanif (2025) and Naida (2024), BOS financial management requires systematic recording and reporting systems to ensure both administrative and substantive accountability, which technological tools can support. Nur Handayani et al. (2022) emphasise that financial accountability also depends on strong internal control mechanisms and public disclosure, both of which can be enhanced through digital systems that provide clear, verifiable data.

Previous studies have highlighted the effectiveness of digital systems like e-budgeting and e-reporting in enhancing transparency and accountability in school financial management. (Prihatin, 2021) found that the ARKAS application has improved the accuracy of financial reporting and facilitated better internal supervision within schools. (Astuti & Hanif, 2025) Similarly, it was concluded that digital transformation in BOS fund management strengthens the principles of good governance by ensuring more orderly financial recording and reducing the risks of reporting errors. However, existing research primarily focuses on e-budgeting and e-reporting separately, without addressing their integration into a

unified system that spans the entire financial management cycle. Arianto et al. (2025) and Bambang Subiyanto et al. (2023) note that while each system offers distinct benefits, combining them into a single, integrated platform could maximise their effectiveness, providing a more holistic solution for financial governance. This gap in the literature underlines the need for further research into integrated digital systems that combine e-budgeting and e-reporting.

Despite the positive findings of e-budgeting and e-reporting, research has largely overlooked the potential for integrating these systems into a unified platform that connects the financial management process from planning to reporting. Bambang Subiyanto et al. (2023) have emphasised that while e-budgeting alone improves transparency, its effectiveness depends on regulatory support and infrastructure readiness. Similarly, the e-reporting system, according to (Warisno et al., 2025) and (Zahirah & Suhaedi, 2025), helps streamline financial reporting processes, reducing administrative burdens and improving accuracy. However, these systems are often studied independently, neglecting their combined benefits when integrated. This study seeks to address this gap by developing an integrated system that enhances both budgeting and reporting processes, focusing on one-roof schools in semi-remote areas that face unique infrastructural and managerial challenges. The integration of e-budgeting and e-reporting has the potential to provide a more efficient, transparent, and accurate financial management system for these schools.

This study introduces an innovative approach by developing a web-based, integrated e-budgeting and e-reporting system tailored to the needs of junior high schools. Unlike previous studies, which have focused on the isolated use of e-budgeting or e-reporting systems, this research integrates both functions into a single platform. The SAE_BOS application is designed to streamline financial planning, verification, and reporting processes while reducing errors and delays. By integrating these two systems, the research aims to overcome the limitations of manual financial systems, which are prone to inaccuracies and inefficiencies. The study's context-sensitive design ensures that the system is adaptable to the unique challenges faced by one-roof schools, which often lack the resources and infrastructure of larger schools. This integrated platform represents a significant advancement in digital financial governance and provides a scalable model for similar schools facing resource constraints.

The research problem this study addresses is whether integrating e-budgeting and e-reporting into a unified platform can improve the effectiveness, transparency, and accountability of BOS fund management in schools. Specifically, the study investigates how this integrated system can resolve issues such as delays in reporting, inaccuracies in financial documentation, and discrepancies between budget plans and actual expenditures, which are common in schools with limited resources. The study argues that integrating these systems will improve the accuracy and reliability of financial records, reduce administrative delays, and enhance overall accountability in managing public funds. Furthermore, the research contributes to the literature by extending the knowledge on integrated digital financial systems in education, an underexplored topic. Using an R&D

approach, this study develops a context-sensitive digital platform adaptable to schools with similar challenges, offering a practical solution to improve BOS fund management in resource-constrained environments.

RESEARCH METHODS

This study employs a Research and Development (R&D) approach to develop an e-Budgeting and e-Reporting system for managing BOS funds at SMPN 5 Satu Atap Geyer. The development model follows a simplified version of the Borg and Gall framework, encompassing stages such as needs analysis, system design, prototype development, validation, testing, and revision (Darmayanti, 2024; Purba, 2024). The rationale behind selecting this design is to create a system that specifically addresses the needs of schools still relying on manual BOS fund management, while simultaneously overcoming technological challenges and resource limitations. This approach enables the development of a practical, applicable system to enhance the efficiency, transparency, and accountability of educational fund management.

The research was conducted at SMPN 5 Satu Atap Geyer, located in Grobogan Regency, Central Java, and selected purposively. This location was chosen because the school still depends on manual management of BOS funds and has limited access to digital technology. This makes SMPN 5 Satu Atap Geyer an ideal case for testing the implementation of a digital system in BOS fund management and for developing and testing a prototype that could benefit other schools in similar situations. The choice of location aligns with national policies that encourage the adoption of technology-based systems for managing educational finances.

Data were collected through observations, interviews, and documentation to identify system requirements and assess the feasibility of system implementation (Benrimoh et al., 2021; Kiruthu-Kamamia et al., 2025). Observations were made of current manual BOS fund management practices, and in-depth interviews were conducted with key stakeholders, including the school principal, BOS treasurer, and administrative staff. Document analysis was also conducted on School Activity and Budget Plan (RKAS) documents, budget realisation reports, and transaction records. Data collection followed a methodological triangulation approach, combining interviews, direct observation during system trials, and document analysis to enhance the validity of the findings.

Data analysis was conducted using both qualitative and quantitative methods. During the needs analysis phase, data were analysed through data reduction, data display, and conclusion drawing to identify core system components. Expert validation data were analysed descriptively by calculating mean scores based on four assessment indicators: usability, functional suitability, security, and system effectiveness, using a four-point scale. The product's feasibility was categorised as follows: 3.26–4.00 (very feasible), 2.51–3.25 (feasible), 1.76–2.50 (less feasible), and 1.00–1.75 (not feasible). Data from limited field testing were analysed descriptively, categorising usability, system effectiveness, and emerging technical constraints. This mixed-methods approach enabled a

comprehensive evaluation of the system's quality and effectiveness in supporting BOS fund management (Kim & Park, 2022; Wan et al., 2025).

RESULTS AND DISCUSSION

Results

The results of this study present the findings from each stage of the Research and Development (R&D) process, including the preliminary study, system design and development, expert validation, and limited field testing. These findings provide a comprehensive overview of the existing problems in BOS fund management, the system requirements identified, and the effectiveness of the developed e-Budgeting and e-Reporting system in improving financial governance at Junior High School. The results of the preliminary study indicate that the management of School Operational Assistance (BOS) funds at SMPN 5 Satu Atap Geyer was still conducted manually using Microsoft Excel-based records and physical documents. The preparation of the School Activity and Budget Plan (RKAS), transaction recording, and budget realisation reporting were carried out separately, creating the potential for data inconsistencies, reporting delays, and input errors. Based on interviews with the school principal and the BOS treasurer, the main challenges included duplicate record-keeping, difficulties in compiling quarterly reports, and limited access to financial information for school stakeholders. Furthermore, the needs analysis revealed that the system to be developed should include key features such as an RKAS-based budgeting module, an integrated automatic transaction recording system, real-time budget realisation monitoring, automatic report generation in accordance with BOS reporting formats, and role-based access control. In addition, the system had to be web-based to ensure flexible access via the school network.

Results of System Design and Prototype Development

Based on the needs analysis, the e-Budgeting and e-Reporting system was designed using a web-based architecture supported by the school's Virtual Private Server (VPS). The system was developed as an integrated dashboard comprising several main modules, as shown in Table 1.

Table 1. Main Features of the e-Budgeting and e-Reporting System

No	Module	Function Description
1	Budget Dashboard	Summary Displays real-time information on budget allocation, realization, and remaining funds
2	RKAS Planning	Facilitates structured budgeting based on BOS components
3	Transaction Input	Records financial transactions with automatic validation
4	Realization Monitoring	Monitors budget absorption and expenditure progress
5	Automatic Reporting	Generates reports in accordance with BOS reporting standards

During prototype development, the system successfully integrated planning and budget-realisation data into a centralised database. The main dashboard presents graphical visualisations of budget absorption percentage, total

available budget, and remaining funds, enabling users to monitor financial conditions in real time. The transaction input feature incorporates automatic validation to minimise errors in nominal entries and account codes. At the same time, the reporting module allows users to generate standardised reports in PDF format in accordance with BOS requirements.

These findings indicate that the developed system not only integrates fragmented financial processes into a unified platform but also enhances data accuracy, real-time monitoring, and reporting efficiency. The availability of automated validation and visualisation features demonstrates the system's potential to reduce human error and support more transparent and accountable BOS fund management.

Expert Validation Results

Expert validation was conducted by two validators: an educational technology expert and a school financial management practitioner, to determine the feasibility of the application. Material validation focused on: (1) compliance with BOS regulations, (2) accuracy and completeness of content/substance, (3) contribution to management effectiveness, (4) contribution to transparency, (5) contribution to accountability, and (6) suitability to school needs. The quantitative assessment results are summarised in Table 2.

Table 2. Material Expert Validation Results

No	Aspect	Mean Score (Value)	Percentage	Category
1	Compliance with BOS Fund Regulations	15	94%	Valid
2	Accuracy and Completeness of Content/Substance	16	100%	Valid
3	Contribution to Management Effectiveness	10	83%	Valid
4	Contribution to Transparency	7	88%	Valid
5	Contribution to Accountability	9	75%	Valid
6	Alignment with School Needs	8	100%	Valid
	Overall Average	65	90.1%	Valid

The overall average score obtained was 90.1% (Feasible), indicating that the system met substantive and regulatory standards for BOS fund management. The highest scores were achieved in content accuracy and completeness, as well as suitability to school needs (100%), demonstrating that the system is comprehensive and contextual. Compliance with BOS regulations (94%), contribution to transparency (88%), and effectiveness (83%) were also categorised as feasible. The contribution to accountability received 75%, suggesting the need to strengthen control features and accountability mechanisms. Overall, the system was deemed ready for implementation with minor revisions. Media validation focused on: (1) User Interface Design, (2) Usability, (3) System Efficiency, (4) Technical Quality, (5) System Security, and (6) Suitability to School Needs. The quantitative assessment results are summarised in Table 3.

Table 3. Media Expert Validation Results

No	Aspect	Mean Score (Value)	Percentage	Category
1	User Interface Design	13	81%	Valid
2	Usability	16	100%	Valid
3	System Efficiency	11	92%	Valid
4	Technical Quality of the System	11	92%	Valid
5	System Security	9	75%	Valid
6	Alignment with School Needs	10	83%	Valid
	Overall Average	70	87.5%	Valid

The overall average score was 87.5% (Feasible), indicating that the system met technical and design feasibility standards. Usability achieved the highest score (100%), reflecting ease of operation. Both system efficiency and technical quality scored 92%, indicating stable, optimal performance. System security scored 75%, suggesting the need for improvements in data protection and access control. Overall, the system was considered ready for use, with only minor refinements required.

Based on both validations, the material expert provided an average score of 90.1%, and the media expert 87.5%, resulting in a combined average of 88.8% (Feasible). These results confirm that the system meets feasibility standards both substantively and technically, although minor improvements in security and accountability features are recommended prior to full implementation.

Limited Field Testing Results

After minor revisions, limited field testing was conducted involving the principal, BOS treasurer, school operator, and two teachers over one simulated budget management cycle. Evaluation was carried out through system usage observation and user response questionnaires. Quantitatively, the results of the limited trial are presented in Table 4.

Table 4. Limited Field Testing Results

No	Evaluated Aspect	Mean Score	Category
1	Ease of Use	3.60	Very Good
2	Reporting Time Efficiency	3.70	Very Good
3	Data Accuracy and Consistency	3.65	Very Good
4	Information Transparency	3.75	Very Good
	Overall Average	3.68	Very Good

The system achieved an overall average score of 3.68 (Very Good). Implementation of the system increased reporting time efficiency by approximately $\pm 40\%$ compared to previous manual methods. Quarterly report compilation, which previously required 3–4 days, can now be completed in 1–2 days. The system also facilitated real-time monitoring of budget realisation and enhanced transparency for school stakeholders. Challenges encountered during testing included internet network stability and the need for initial user training.

Nevertheless, the system was generally considered practical, effective, and ready for full implementation.

Final Product of the e-Budgeting and e-Reporting System

The final product is a web-based integrated e-Budgeting and e-Reporting system designed as a unified platform for BOS fund management. The system enables digital, structured, and well-documented planning, recording, monitoring, and reporting processes. Revisions based on expert validation and field testing ensured that the final product meets the criteria of validity, practicality, and effectiveness for use at SMPN 5 Satu Atap Geyer. The interface of the web-based e-Budgeting and e-Reporting system is presented in Figure 1.

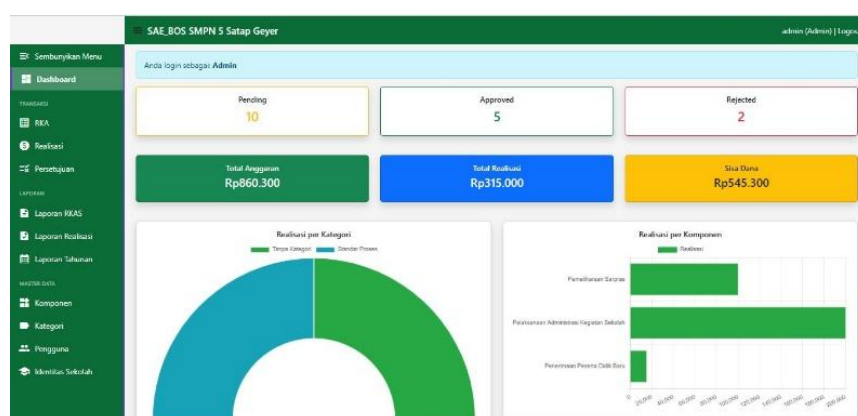


Figure 1. Web-Based e-Budgeting and e-Reporting System Application

The initial system interface demonstrates a web-based dashboard management approach that is informative and integrated. The top header displays the system identity “SAE_BOS SMPN 5 Satap Geyer,” along with the user role (Admin), indicating the implementation of role-based access control for security and authorisation management.

The left-side navigation menu is structured into key categories: Dashboard; Transactions (RKA, Realisation, Approval); Reports (RKAS Report, Realisation Report, Annual Report); and Master Data (Components, Categories, Users, School Identity). This modular structure covers the entire BOS management cycle from planning to reporting.

The central dashboard displays transaction status summaries (Pending: 10; Approved: 5; Rejected: 2), functioning as an internal monitoring and control mechanism. It also presents key financial summaries, including Total Budget, Total Realisation, and Remaining Funds. Information cards enable users to quickly and clearly assess the school’s financial condition in real time.

Data visualisation features include doughnut charts showing realisation by category and bar charts showing realisation by activity components. These visualisations provide insights into the distribution of funds across categories such as infrastructure maintenance, school administration, and student admissions. Such features strengthen the system’s role as a transparent, data-driven decision-making tool.

Overall, the system interface demonstrates compliance with key principles: (1) integrated data within a single dashboard; (2) ease of navigation; (3) financial transparency; and (4) real-time monitoring of transaction status and budget realisation. This indicates that the system functions not only as a digital recording tool but also as an instrument for internal control and accountability in BOS fund management.

Discussion

The results of the needs analysis for the e-Budgeting and e-Reporting system revealed that the current management of BOS funds at the Junior High school is semi-manual, relying on spreadsheets and physical archives, with no integration. This lack of a unified system leads to reporting delays, data duplication, and increased risks of administrative errors, which are consistent with the findings of Khan et al. (2021), Ogeawuchi et al. (2023) and Papageorgiou et al. (2024), who emphasise the necessity of integrated digital systems for ensuring data consistency, efficiency, and accountability in public financial management. These results indicate that fragmented systems hinder operational efficiency, transparency, and the effectiveness of control mechanisms in financial governance. The lack of technological infrastructure, low digital literacy, and the absence of system integration contribute significantly to the observed inefficiencies. Empirical studies also support the finding that e-budgeting systems improve transparency and governance effectiveness, particularly when supported by organisational readiness and user-oriented design (Ahmad et al., 2025; Arianto et al., 2025; Carrera Mora & Reyes Mendoza, 2025; Kovari, 2024). Therefore, the study emphasises the urgency of implementing an integrated digital system to address these inefficiencies and improve transparency and accountability.

The system design and prototype development process followed a user-centred approach, incorporating key features such as a main dashboard, RKA/RKAS modules, realisation modules, automatic validation, and instant report generation. This design approach aligns with Khairati & Putra (2024), who argue that aligning system functions with user workflows is crucial for enhancing usability and functionality. Previous studies, such as Adesina et al. (2024) and Pediredla (2025), have shown that integrated financial systems improve effectiveness by reducing redundancy and input errors. This study has applied these principles by incorporating automated budget validation and transaction logging, thereby minimising errors and improving control. From a broader perspective, integrating such features contributes to the transition toward data-driven governance in public financial management (Adekunle, 2025; Damiyano, 2025; Hossin et al., 2023). The findings demonstrate that the design and development of this system are not only technically efficient but also align with broader goals of fostering transparent, accountable, and efficient governance in educational financial management. This integration ensures smoother workflows and increased system effectiveness, aligning with global digital governance standards.

Expert validation results indicated that the system was categorised as "Feasible with Minor Revisions," reflecting an adequate system quality,

information quality, and usability. These results are consistent with the DeLone and McLean Information Systems Success Model, which identifies system and information quality as key factors influencing user satisfaction and system use (Abd Aziz et al., 2024; Al-Okaily et al., 2025; Kar, 2021). Previous research by Bisogno et al. (2022) and Wan et al. (2025) confirms that high-quality e-budgeting systems significantly contribute to fiscal transparency and stronger internal controls in public financial management. The positive evaluation of usability also aligns with the Technology Acceptance Model, which suggests that perceived ease of use and usefulness are critical factors for system acceptance (Alsyof et al., 2023; Cheah et al., 2023; Prasetyo et al., 2025). The findings indicate that the developed system is both technically sound and conceptually feasible for implementation, with only minor revisions needed before broader adoption. This validation result indicates that the system is ready for use, with necessary adjustments to further enhance its effectiveness, usability, and overall performance in educational financial management.

The limited trial results demonstrated significant improvements in efficiency during budget preparation and reporting. The system's ability to generate automated reports without manual recapitulation substantially reduced the administrative burden on the school treasurer. These findings are consistent with Ebhota et al. (2024) and Danar (2024), who highlight the impact of digital budgeting systems on enhancing bureaucratic efficiency and productivity. Additionally, the system's automatic validation feature, which ensures that budget entries do not exceed allocated ceilings, reduces the risk of human error. This aligns with the research by Ebhota et al. (2024), who demonstrate that e-budgeting systems improve data accuracy and consistency through integrated digital controls. The results of the limited trial confirm that the e-Budgeting and e-Reporting system not only improves administrative efficiency but also enhances the quality of financial governance by reducing human error and increasing the transparency of financial processes. This confirms the positive impact of digital tools on improving financial management in educational institutions.

Moreover, the real-time dashboard enabled the principal to access up-to-date data for decision-making, which aligns with the principles of evidence-based governance in public administration (Taiwo, 2025; Van Ryzin, 2021). This functionality enables decision-makers to access accurate financial data in real time, aiding planning, evaluation, and decision-making. The dashboard's real-time nature ensures school leadership has immediate access to financial information, supporting informed decision-making. This capability enhances the school's administrative efficiency by reducing delays and supporting better management practices. The beta testing results indicate that the system not only improves administrative efficiency but also provides strategic support for data-driven management. This is particularly important in educational settings, where timely and accurate data can significantly influence decision-making and resource allocation. The positive results from the limited trial further validate the system's contribution to the broader goals of improving educational financial governance.

The final product of the developed system is an integrated web-based platform that includes an interactive dashboard, planning and execution modules,

automated validation, digital audit trails, and ready-to-print reports. This system is designed to enhance transparency and accountability by providing systematically documented and accessible financial data. The integration of budgeting and reporting processes into a unified platform aligns with prior research by Arianto et al. (2025) and Islam (2025), which indicates that e-budgeting improves fiscal transparency and strengthens public trust in institutions. By streamlining financial management processes and ensuring well-documented financial data, the system addresses the inefficiencies of manual management. The integration of budgeting and reporting into a single platform ensures a more cohesive, accurate, and accountable financial management system. The findings suggest that integrating e-budgeting and e-reporting into a unified digital platform can effectively overcome inefficiencies in manual financial systems, thereby improving transparency, accuracy, and accountability in educational financial governance.

In conclusion, this study's findings underscore the potential of integrated digital systems to address long-standing issues in educational financial management. The developed e-Budgeting and e-Reporting system demonstrates how integrating budgeting and reporting processes into a unified platform can enhance the efficiency, accuracy, and transparency of financial management in schools. This study makes a significant contribution to the literature by providing a replicable model for schools facing similar challenges, particularly those with limited resources and infrastructure. The integration of digital financial systems in public education is essential for improving governance quality and ensuring the effective use of public funds. This research provides practical insights and a framework for implementing integrated digital systems in schools, which can be adopted to improve the management of educational funds and strengthen public trust in educational governance (IMF, 2022; Diamond, 2021). This study not only contributes to the academic understanding of digital financial governance but also offers actionable solutions for real-world implementation.

CONCLUSION

The key finding of this research is that the current management of BOS funds is hindered by semi-manual processes that lead to data inconsistencies, reporting delays, and administrative errors. These challenges highlight the need for an integrated and efficient system to improve financial governance. The development of an integrated e-Budgeting and e-Reporting system addresses these inefficiencies by offering features such as real-time monitoring, automatic validation, and instant report generation. This system significantly enhances operational efficiency, transparency, and accountability in the management of BOS funds. The positive results from expert validation and field testing confirm that the system is feasible and offers substantial improvements in administrative processes, making it a practical solution for schools facing similar challenges.

The strength of this study lies in its contribution to understanding how digital financial governance can improve transparency and accountability in educational institutions. By integrating budgeting and reporting processes into a unified platform, this research provides a replicable model for schools with limited

resources. Although the study is limited in scope, future research could explore its long-term impact and assess its applicability across diverse educational contexts. Additionally, future developments could enhance the system's security and scalability to meet the evolving needs of educational institutions.

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