

377_SIMILARITY_BISTEK

by Jolene Hardwick

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Cash Recording Information System For Receipts And Expenditures (Study At One Of The Schools In Bandung)

ABSTRACT

This study aims to develop and execute a web-based cash receipt and disbursement information system to address financial management issues in a school in Bandung. Before the system's development, cash transaction recording was conducted manually with notebooks and spreadsheets, susceptible to inaccuracies, reporting delays, and inefficiencies in time and effort. An information system was built to address these issues by streamlining transaction recording, accelerating the reporting process, and enhancing the accuracy and efficiency of cash management.

This study employs data-gathering methods such as interviews, observations, literature reviews, and documentation analysis. The system was developed utilizing a prototyping methodology, facilitating extensive contact between engineers and users to create a solution that meets their requirements. This system was constructed utilizing the PHP programming language alongside the Laravel framework, employing a MySQL database operated via XAMPP and written with the Visual Studio Code editor.

The findings of this study demonstrate that the developed cash receipt and disbursement information system can enhance schools' ability to record and manage cash transactions with greater efficiency, accuracy, and organization. This technology facilitates the generation of rapid cash reports that are accessible at any time, thereby enhancing the decision-making process and ensuring transparent financial reporting. Consequently, this system serves as an appropriate solution for facilitating the digitalization of financial administration within the educational setting.

Keywords: Information System, Cash Receipt, Cash Expenditure, Laravel, Financial Administration, School, Prototype

INTRODUCTION

The progression of information ¹ technology has emerged as a crucial element in enhancing the efficiency and efficacy of diverse activities, particularly within the education sector. An essential element in the administration of educational institutions is the financial recording system, particularly with cash revenues and disbursements. The information system is essential for enhancing the methodical, accurate, and accountable management of school administration and finances. Nevertheless, not all educational institutions have established a fully integrated information system. Numerous educational institutions continue to employ a manual recording technique for financial management, including a school in Bandung, which is the focus of this study.

The school employs a manual system for documenting cash receipts and disbursement transactions. The financial recording system depends on paper, ledgers, and basic spreadsheet software that lacks integration with other systems. This circumstance may lead to numerous issues, including the danger of recording inaccuracies, data redundancy, document loss, challenges in transaction tracking, and the inefficient use of time and resources. Furthermore, manual recording complicates the generation of financial reports that are timely, precise, and compliant with the stipulated timeframe. This condition undoubtedly

challenges enhancing administrative and financial governance within the educational setting.

This issue indicates a pressing necessity to establish a computerized information system that is an efficient and structured tool for recording all cash transactions and expenditures. This information system aims to enhance school financial management's transparency, accountability, and timeliness. The proposed system is anticipated to assist schools, particularly treasurers, in real-time cash flow monitoring, centralized financial data storage, and the swift and precise preparation of financial reports. (Febriana & Dunakhir, 2024; Resca & Munandar, 2022; Riwijanti, 2022)

This study aims to create and deploy a web-based information system to record cash inflows and outflows, enabling schools to handle their financial activities digitally. This research is a case study performed at a school in Bandung that encountered challenges in the manual financial recording process. By creating a web-based system, users may access and control data anytime and from any location, provided they have an internet connection. This condition offers enhanced flexibility in contrast to typical systems that are constrained and segregated.

This study's information system employs a prototype system development methodology, enabling user participation in the system design process via an iterative cycle. This method was selected because of its advantages in development flexibility, capacity for updates

based on end-user feedback, and its ability to expedite the entire system development process. This process entails developers assessing user requirements, constructing a preliminary version of the system (prototype), refining it based on input, and evaluating the system's functionality before full implementation.

During the data collection phase, researchers engaged in various activities, including interviews with school proprietors and treasurers, direct observation of the cash recording process, literature reviews about financial information systems, and compiling manually executed financial transaction documentation. Interviews were undertaken to ascertain the school's financial workflow, system requirements, challenges encountered, and user expectations for the forthcoming system. Observations were undertaken to ascertain the actual conditions of cash recording in the field. Documentation is a reference for assembling data structures and financial reports within the system.

After data collection, the system design process is initiated by determining system requirements for input, processing, and output. The system input comprises cash receipt data, cash expenditures, transaction types, transaction dates, monetary amounts, and supplementary information. The procedure includes documenting transactions, computing cash balances, and categorizing data according to specific classifications and temporal intervals. The system generates cash inflow reports, cash

outflow reports, and cash balance recapitulation reports, which can be printed or exported in specific formats. The system interface is built with a focus on usability, information readability, and intuitive navigation. System users, including school treasurers, can efficiently input transaction data, retrieve historical data, and swiftly generate financial reports. In conjunction with the Laravel framework, the PHP programming language is employed for system development due to its systematic and secure architecture. The coding editor employed is Visual Studio coding (VSCode), and the local server utilized for executing and testing the system is XAMPP. Utilizing Laravel facilitates a more organized, manageable, and secure system development process. (Salam, 2022; Kurniawan & Kirana, 2022; Khasanah, 2022)

This cash receipt and disbursement recording information system aims to facilitate the digital transformation of financial management in schools. This technology enhances the efficiency of recording and reporting while augmenting financial accuracy and transparency. Moreover, the financial data housed within the system can serve as a foundation for decision-making by school administration. The system can be further enhanced for integration with the academic and student payment systems, thereby establishing a comprehensive digital ecosystem inside the educational environment. (Pramudito, Pettalongi, Tawil, Hermila & Zein, 2024; Berti, Park, Rafiei & van der Aalst, 2023)

Numerous prior studies have demonstrated the significance of adopting a technology-driven financial information system to enhance the governance of educational institutions. A study by Rahmawati (2022) indicated that using a web-based accounting information system in private elementary schools in Yogyakarta enhanced the efficiency of the treasurer's duties and the precision of financial reports. A study by Yusuf and Kartika (2023) demonstrated that digitizing school cash records can decrease recording errors by as much as 80% and cut reporting time by up to 50%. The findings indicate that deploying a financial information system substantially enhances the quality of school financial management.

This study explicitly examines daily cash recording, including cash inflows and outflows, which are the most normal actions in the school financial cycle, in contrast to earlier studies that concentrate on the entire accounting system or annual financial reporting system. This emphasis offers innovative value as it can be the primary basis for developing a more intricate school accounting system. A comprehensive grasp of the daily cash recording system facilitates the systematic construction of advanced systems, including budget modules, student receivables modules, and year-end financial reports. (Agustin & Kurniawan, 2024; Poppe, Vrolijk & Bosloper, 2023; Cahyani & Amna, 2022)

In conclusion, establishing an information system for tracking cash inflows and outflows is

crucial for addressing the issues of managing school finances in the digital age. Educational institutions can enhance efficiency, precision, and transparency in their financial documentation by employing information technology and an appropriate system development methodology. This study seeks to develop a functional information system while also contributing to establishing a culture of practical and professional financial governance inside educational institutions. Consequently, the aspiration for the future is that the established system can be duplicated and modified by other institutions encountering analogous challenges.

METHOD

This research employs a qualitative descriptive methodology alongside a prototype-based information system development technique to design and construct a cash receipt and disbursement recording system. This method was selected because it facilitates direct user engagement in the system development process, hence yielding solutions aligned with actual field requirements. The study primarily examines the processes of needs analysis, system design, software development, and system testing at a school in Bandung that has been utilizing a manual cash recording approach.

Data was collected using four primary methods: interviews, observations, documentation, and literature reviews. Interviews

were held with the school owner and treasurer to gather information regarding the cash recording process, challenges encountered, and expectations for the proposed system. Observations were undertaken to immediately comprehend the procedure of documenting financial transactions within the institution. Documentation was acquired from existing financial transaction records, including revenues and disbursements, along with manual cash reports utilized as references in assembling the data structure. Simultaneously, literature reviews investigated theories about information systems, financial management, and system development methodologies.

During the system development phase, a prototype methodology is employed, encompassing three primary stages: user engagement, initial prototype construction, and prototype enhancement based on feedback. The interface, database architecture, and system process flow are devised upon identification of the system requirements. The system is developed utilizing the PHP programming language alongside the Laravel framework, employing XAMPP as a local server and Visual Studio Code as the text editor.

Upon completion of system development, a testing procedure is conducted to verify the system's functionality and alignment with user requirements. Testing is conducted with users (school treasurers) involving transaction input scenarios, data aggregation, report generation,

and verification of balance accuracy. The outcomes of this testing serve as the foundation for implementing final enhancements before the system's readiness for operational deployment in the educational setting.

RESULTS and DISCUSSION

Research conducted in a school in Bandung revealed that the cash tracking system previously employed was manual, utilizing notebooks and basic spreadsheet documentation. This manual approach possesses several inherent shortcomings, including the potential for data loss, inconsistencies in bookkeeping, computational errors, and challenges in the prompt and precise preparation of financial reports. Observations and conversations with the school treasurer revealed that transaction recording frequently experienced delays due to significant administrative burdens, resulting in cash reports not being consistently updated in real-time. This condition undoubtedly affects delays in the decision-making process of school leaders who require actual financial data.

Following an analysis of the system requirements, a web-based cash receipt and disbursement information system was developed to streamline the recording process, expedite reporting, and enhance data accuracy. This system has numerous primary functions, including cash receipt input, cash disbursement input, transaction search by date or description, automatic balance computation, and generating monthly and annual cash reports in a printable digital format. This system employs the PHP programming language utilizing the Laravel

framework, a MySQL database, and an interface created with Visual Studio Code during implementation. The school treasurer did preliminary testing to assess the system's usefulness and correctness.

The test results indicated that this information system successfully eradicated numerous deficiencies in the previously employed manual approach. Cash receipt and disbursement transactions can be recorded instantaneously and in real-time, ensuring that financial reports are consistently updated promptly. Furthermore, the system autonomously computes the available cash balance, reducing computation inaccuracies. The transaction search functionality enables the treasurer to access historical data without opening physical files or outdated spreadsheet documents.

Further convenience is observed in the preparation of reports. Historically, manual summarization of monthly financial reports was time-consuming, particularly prior to internal audits or submissions to foundations or school administration. This system enables the generation of reports in seconds with minimal clicks, including summary graphs and transaction data, enhancing the efficiency of the reporting process. The system has a report export function in PDF and Excel formats, streamlining data distribution to relevant parties.

Subsequent discussions indicated that the deployment of this information system affects not only the efficiency of cash recording but also the transparency and accountability of school fund administration. Through a structured and meticulously documented framework, each cash transaction can be distinctly identified from the transaction date, monetary amount, and transaction type to the

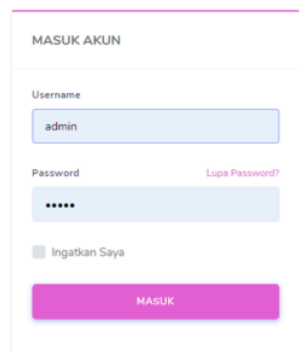
participating parties. This condition fosters confidence between school administration and stakeholders, including students' parents and foundations.

Moreover, with displayed and organized financial data, schools can analyze income and expenditure trends over a specific period. Schools can ascertain the months with the highest expenditures and assess the efficacy of budget utilization. Consequently, this system functions as a recording instrument and strategic decision-making apparatus grounded in facts.

This system is technically adaptable and user-friendly, even for individuals without information technology experience. The interface is designed to be straightforward and intuitive, facilitating user use of the system without extensive training. Given the constrained human resources at educational institutions, particularly in technology, this condition represents a significant benefit.

Nevertheless, other observations and issues emerge during the initial deployment. One requirement is uniformity in the use of the system. Certain staff members continue to record manually due to longstanding habits. Consequently, additional socialization and training are required to ensure that all parties are proficiently utilizing the system. Furthermore, the school management must demonstrate commitment to establishing this system as the primary instrument in the financial administration process.

1. From Login Display



MASUK AKUN

Username

admin

Password Lupa Password?

.....

☐ Ingatkan Saya

MASUK

Figure 1. Login Form Display

2. Dashboard Display



Figure 2. Dashboard Display

3. Category Menu Display



Figure 3. Category Menu Display

4. Money In Menu Display

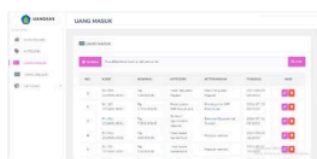


Figure 4. Money In Menu Display

5. Money Out Menu Display

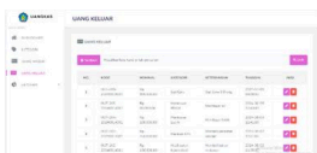
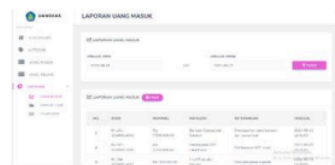


Figure 5. Money Out Menu Display

6. Money In Report Display



REPORT MASUK

No.	Transaksi	Saldo Kasir	Aksi
1	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
2	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
3	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
4	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
5	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]

Figure 6. Money In Report

7. Money Out Report Display

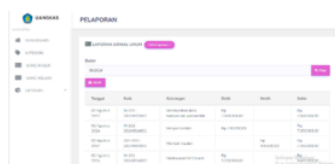


REPORT KELUAR

No.	Transaksi	Saldo Kasir	Aksi
1	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
2	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
3	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
4	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
5	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]

Figure 7. Money Out Report Display

8. General Journal Report



REPORT JURNAL

No.	Transaksi	Saldo Kasir	Aksi
1	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
2	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
3	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
4	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
5	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]

Figure 8. General Journal Report

9. Journal Report Per Category



REPORT JURNAL PER KATEGORI

No.	Transaksi	Saldo Kasir	Aksi
1	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
2	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
3	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
4	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]
5	Saldo Kasir	Rp. 10.000.000,00	[Edit] [Hapus]

Figure 9. Journal Report Per Category

10. Logout Display

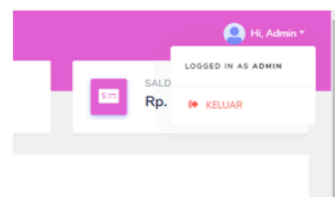


Figure 10. Logout Display

Implementing this cash reception and expenditure information system has effectively addressed the school's requirement for a more contemporary, efficient, and precise cash management solution. This

method accelerates financial management, enhances transparency, and facilitates prompt decision-making. It also facilitates formulating a more realistic and quantifiable budget plan, grounded in previous facts documented within the system.

This system can be further enhanced by incorporating more features based on the school's requirements within the sustainability framework. For instance, the student attendance system could be integrated to facilitate automated monthly fee payments, or a notice tool could be used to alert people of certain payment due dates. Furthermore, with the rising adoption of cloud technology, this system can be hosted online, enabling access from several devices and places.

This analysis indicates that digitalizing financial administration in the school industry is imperative rather than a mere choice. As institutions with a pivotal role in shaping national education, schools must have a system that ensures transparent and effective financial governance. The deployment of such an information system enables schools to modernize their operations and exhibit greater accountability in handling educational finances.

Consequently, it can be inferred that the cash receipt and expenditure information system established through this research substantially enhances the efficiency of cash recording in schools, elevates the quality of financial reporting, facilitates data-driven decision-making, and fortifies the transparency and accountability of educational institutions. This result demonstrates that incorporating information technology in educational governance is a pertinent strategic measure in addressing the issues of contemporary administration.

CONCLUSION

Research conducted in a school in Bandung concludes that developing a website-based cash reception and disbursement information system has significantly enhanced the school's financial management system. Prior to the implementation of this system, financial transaction recording was conducted manually, leading to issues such as delayed reporting, recording inaccuracies, the potential for data loss, and challenges in swiftly and accurately creating financial reports. This circumstance unequivocally undermines the decision-making process that necessitates accurate and current financial facts.

Adopting this information system, developed with PHP, Laravel, and the MySQL database, enhances the efficiency and organization of the cash recording process. This system facilitates the recording of real-time cash inflows and outflows while offering automated reporting capabilities, data retrieval, and financial summary visualizations through graphs. This system enhances financial management transparency by methodically recording all transactions, which can be traced as required. This condition directly enhances the accountability of school fund management.

This technology enhances the efficiency of the administrative staff's working time, as reports that once required extensive manual preparation may now be generated in seconds. This convenience undoubtedly enhances the value of supporting school operational tasks, particularly in preparing reports for the foundation, school committee, or relevant agencies.

This information system has demonstrated efficacy in addressing issues related to financial recording and reporting in educational institutions. This system can be further enhanced with additional features based on institutional demands and combined with other systems to facilitate comprehensive digitalization in the educational environment. Consequently, this system represents a strategic preliminary measure in the modernization of school administrative management.

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