



Cashless Educational Finance Management in Islamic Boarding Schools: Integrating POAC, Technology Acceptance Model, and Islamic Financial Principles

Teguh Saputra¹, Rustan S², Helmi Kamal³

^{1,2,3}State Islamic University of Palopo (UIN Palopo), Indonesia

E-mail: ¹teguhsaputra302@gmail.com, ²rustan2023@gmail.com,
³helmikamal12@uinpalopo.ac.id

(Received: June-2025; **Reviewed:** August-2025; **Accepted:** September-2025; **Available
Online:** November-2025; **Published:** November-2025)

Abstract

This study examines the implementation of cashless educational finance management at Pondok Modern Nur El Haq by integrating the Planning, Organizing, Actuating, and Controlling (POAC) framework, the Technology Acceptance Model (TAM), and Islamic financial principles. This study employed a qualitative case study design. Data were collected through semi-structured interviews, non-participant observations, and document analysis involving institutional leaders, finance officers, IT administrators, cooperative staff, teachers, and parents. The data were analyzed using thematic analysis based on the interactive model of Miles, Huberman, and Saldaña. The findings indicate that strategic planning, collaborative organizational governance, systematic operational procedures, and continuous monitoring supported the successful implementation of the cashless system. Stakeholders showed positive acceptance because they perceived it as useful and easy to use, while ongoing institutional support facilitated adaptation during implementation. The study also reveals that the cashless financial management system reinforces the Islamic financial principles of *amanah* (trustworthiness), *'adl* (justice), transparency, and accountability through automated transaction recording, standardized financial procedures, and real-time financial monitoring. This study contributes to the educational finance literature by proposing an integrated framework that combines managerial governance, technology acceptance, and Islamic financial ethics to explain digital financial management in Islamic educational institutions. The findings offer practical implications for educational leaders seeking to modernize financial governance while preserving Islamic ethical values.

Keywords: Cashless Educational Finance; Islamic Boarding School; POAC; Technology Acceptance Model; Islamic Financial Principles; Digital Governance.

Introduction

Digital transformation has reshaped the governance of educational institutions worldwide, extending beyond teaching and learning to encompass administrative and financial management systems (Zhukabayeva et al., 2025). Advances in digital technologies have accelerated the adoption of cashless payment systems across multiple sectors, including banking, healthcare, transportation, and education (Ashok & Hallur, 2024; Tay et al., 2022). Within educational institutions, digital financial management is increasingly recognized as an essential component of institutional governance because it enables faster transactions, improves financial accountability, reduces administrative costs, and strengthens organizational transparency (Putrevu & Mertzanis, 2023; Vettriselman et al., 2025). As educational organizations modernize their administrative systems, the shift from conventional cash-based transactions to integrated digital payment systems has become a key strategy for improving operational efficiency and institutional sustainability.

Educational finance management represents one of the most critical dimensions of educational administration because financial resources determine the continuity of educational services, infrastructure development, staff welfare, and educational quality (Amelia & Karim, 2025; Riinawati, 2022). Effective financial management requires not only adequate financial resources but also systematic planning, transparent implementation, continuous monitoring, and accountable reporting (Anggareka, 2024; Zahirah & Suhaedi, 2025). Weak financial governance often leads to administrative inefficiency, delayed financial reporting, misuse of funds, and declining stakeholder confidence (Ardiputra et al., 2025; Nasir et al., 2025). Consequently, educational institutions are increasingly encouraged to adopt digital financial technologies that strengthen governance while supporting evidence-based decision-making.

The emergence of cashless payment technologies has transformed organizational financial management by replacing manual cash transactions with electronic payment systems integrated through banking services, mobile applications, smart cards, and digital wallets. Previous studies consistently demonstrate that digital payment systems improve transaction efficiency, minimize human error, enhance financial security, and provide real-time financial information for organizational management (Dhanasekaran, 2026; Go et al., 2025; Sholihun et al., 2026). Automated financial records also facilitate auditing processes and strengthen institutional accountability because every transaction is digitally documented and traceable (Almadadha, 2024; Nofel et al., 2024). These advantages make cashless systems particularly attractive for organizations that manage large volumes of daily financial transactions involving multiple stakeholders.

Within educational settings, cashless payment systems have gradually been implemented to facilitate tuition payments, cafeteria transactions, library services, transportation fees, and students' daily expenditures. The digitalization of educational finance not only simplifies payment procedures but also enables parents and institutional administrators to monitor financial activities more effectively (Hidayah et al., 2025; Khan et al., 2022; Priyanggani et al., 2026). Such developments are particularly relevant for educational institutions that accommodate residential students, where financial transactions occur continuously and involve substantial operational complexity. Digital financial systems therefore offer opportunities to improve both

administrative efficiency and financial transparency while reducing the risks associated with conventional cash handling.

Despite these developments, existing literature on educational finance management remains fragmented. Most previous studies have concentrated on budgeting practices, educational funding models, financial planning, or the relationship between financial management and educational quality. Studies of cashless payment systems have largely been conducted in banking, financial technology, consumer behavior, or commercial organizations, emphasizing technology adoption, transaction efficiency, and user satisfaction. Comparatively little attention has been devoted to understanding how cashless systems reshape educational finance management processes within educational institutions, particularly those characterized by unique organizational cultures and governance structures.

This gap is even more apparent in Islamic boarding schools (*pesantren*), which have distinctive administrative characteristics compared with conventional educational institutions. Islamic boarding schools simultaneously function as educational institutions, residential communities, and religious organizations, creating a considerably more complex financial environment. Daily financial management includes tuition payments, dormitory expenses, student allowances, food services, cooperative stores, extracurricular activities, and numerous operational expenditures involving students, parents, administrators, and external vendors. Managing these financial activities through conventional cash-based systems often increases administrative workloads, creates security vulnerabilities, limits transaction traceability, and complicates financial supervision.

Adopting cashless financial management therefore offers significant opportunities for Islamic boarding schools to modernize their governance systems. Digital payment technologies potentially improve administrative efficiency by automating transaction records, reducing manual bookkeeping, strengthening financial monitoring, and facilitating transparent reporting for institutional leaders and parents. Furthermore, integrated digital systems enable real-time financial information that supports managerial decision-making and organizational accountability. Nevertheless, implementing digital financial systems within Islamic educational institutions involves challenges extending beyond technological infrastructure, including organizational readiness, stakeholder acceptance, institutional culture, and compliance with Islamic ethical principles governing financial transactions.

Current research has not sufficiently examined these multidimensional issues. Existing studies generally investigate either financial management from an educational administration perspective, digital payment adoption from a technological perspective, or Islamic financial principles from a normative perspective. Few empirical studies integrate these perspectives into a comprehensive analytical framework that explains how digital financial systems are planned, organized, implemented, monitored, accepted by users, and aligned with Islamic financial values. Consequently, understanding cashless educational finance management requires an interdisciplinary perspective that combines management theory, technology acceptance, and Islamic financial governance.

This study addresses this gap by integrating three complementary theoretical perspectives. First, George R. Terry's Planning, Organizing, Actuating, and Controlling (POAC) framework provides a systematic lens for examining managerial processes underlying the implementation of cashless financial systems (Terry, 2021). Second, the Technology Acceptance Model (TAM) explains users' acceptance of digital financial technologies through perceived usefulness and perceived ease of use, both of which influence actual system utilization (Davis et al., 2024). Third, Islamic financial principles—including *amanah* (trustworthiness), *'adl* (justice), transparency, and accountability—provide an ethical framework for evaluating whether digital financial management remains consistent with the values underpinning Islamic educational institutions (Sari & Sunhaji, 2025). Integrating these three perspectives enables a more comprehensive understanding of digital financial governance than approaches that rely on a single theoretical framework.

This study is set in Pondok Modern Nur El Haq, an Islamic boarding school in Indonesia that has implemented an integrated RFID-based cashless payment system connected to banking services. Through this system, tuition payments, student allowances, cooperative transactions, and other financial activities are conducted electronically, while parents can monitor their children's financial transactions in real time. This comprehensive implementation provides a valuable opportunity to investigate how digital financial management operates within the distinctive organizational environment of an Islamic boarding school.

Accordingly, this study examines the implementation of cashless educational finance management in an Islamic boarding school by integrating managerial, technological, and ethical perspectives. Specifically, the study analyzes managerial processes through the POAC framework, investigates users' acceptance of the cashless system using the Technology Acceptance Model, and evaluates the implementation of Islamic financial principles within digital financial governance. By integrating these perspectives, the study contributes to the growing literature on educational finance management, digital transformation in educational administration, and financial governance in Islamic educational institutions. Furthermore, the findings are expected to provide practical guidance for policymakers and educational leaders seeking to modernize financial management while preserving the ethical values that characterize Islamic education.

Method

This study used a qualitative case study design to gain an in-depth understanding of implementing cashless educational finance management in an Islamic boarding school. A case study approach was considered appropriate because it enables researchers to investigate contemporary organizational phenomena within their real-life context while considering institutional characteristics, managerial processes, and stakeholder interactions (Gammelgaard, 2017). Rather than measuring causal relationships, this study sought to explain how various stakeholders plan, implement, monitor, and experience cashless financial management.

The research was conducted at Pondok Modern Nur El Haq, Indonesia, an Islamic boarding school that has implemented an integrated RFID-based cashless payment system connected with banking services. The institution was selected purposively

because it represents one of the few Islamic boarding schools that have comprehensively adopted digital financial management for tuition payments, students' daily transactions, and institutional financial administration. This setting provides an appropriate context for examining the interaction between managerial practices, technology acceptance, and Islamic financial governance.

The study selected participants through purposive sampling based on their direct involvement in implementing and operating the cashless financial system (Robinson, 2023). The participants included the boarding school director, financial manager, treasurer, information technology administrator, cooperative management staff, teachers responsible for student affairs, and parents whose children actively used the cashless payment system. These participants were considered capable of providing comprehensive information regarding policy formulation, operational implementation, financial supervision, system utilization, and users' experiences.

Data were collected on April 2026 using three complementary techniques: semi-structured interviews, non-participant observations, and document analysis. Semi-structured interviews explored participants' experiences regarding financial planning, organizational arrangements, operational implementation, monitoring mechanisms, perceived usefulness, perceived ease of use, and ethical considerations in digital financial management. Observations focused on the implementation of cashless transactions within daily educational activities, including tuition payments, cooperative purchases, and transaction monitoring. Documentary evidence included institutional financial regulations, standard operating procedures, financial reports, transaction records, implementation guidelines, and internal policy documents related to the cashless system.

The study employed methodological triangulation to enhance the credibility of the findings. The study compared interview information with observational evidence and documentary records to verify consistency across multiple data sources. The study also conducted member checking by returning interview summaries to participants for confirmation, while prolonged engagement in the research setting enabled a more comprehensive understanding of institutional practices. In addition, researchers conducted peer debriefing throughout the analysis process to strengthen analytical rigor and minimize interpretive bias.

Data were analyzed using thematic analysis following the interactive model proposed by Miles, Huberman, and Saldaña, consisting of data condensation, data display, and conclusion drawing with continuous verification (Miles et al., 2014). The team transcribed interview recordings verbatim before coding them inductively and deductively. Initial coding identified emerging concepts in participants' narratives, while subsequent coding organized the data into broader analytical themes aligned with the study's theoretical framework.

Three complementary analytical frameworks guided the analysis. First, George R. Terry's Planning, Organizing, Actuating, and Controlling (POAC) model examined the managerial processes underlying cashless educational finance management. Second, the Technology Acceptance Model (TAM) informed the analysis of stakeholders' perceptions of the cashless system's usefulness and ease of use. Third, Islamic financial principles, including *amanah* (trustworthiness), *'adl* (justice), transparency, and

accountability, served as an ethical framework for evaluating whether the implementation of digital financial management aligned with Islamic values. Integrating these three frameworks enabled a multidimensional interpretation of cashless educational finance management from managerial, technological, and ethical perspectives. To ensure research ethics, the researchers obtained informed consent from all participants before data collection. Participants were informed about the study's purpose, voluntary participation, the confidentiality of personal information, and their right to withdraw at any stage of the research. The researchers anonymized all personal identifiers during data analysis and reporting to protect participants' privacy. To ensure a systematic analysis, this study integrated three complementary analytical frameworks: George R. Terry's POAC model, the Technology Acceptance Model (TAM), and Islamic financial principles. Each framework addressed different dimensions of cashless educational finance management, allowing the phenomenon to be examined from managerial, technological, and ethical perspectives.

Results

Planning the Cashless Financial Ecosystem

The implementation of the cashless financial management system began with strategic institutional planning to modernize financial administration and improve accountability. The planning process involved policy formulation, infrastructure investment, stakeholder preparation, and collaboration with banking partners. These initiatives established the institutional foundation for the transition from conventional cash transactions to an integrated digital financial system. As explained by the financial manager:

"Before implementing the cashless system, we first developed institutional policies, coordinated with the partner bank, prepared the supporting infrastructure, and informed parents about the new payment procedures." (Financial Manager)

This statement indicates that implementation was not limited to technological procurement but involved organizational preparation and stakeholder engagement. Institutional planning therefore encompassed both technical and managerial dimensions, ensuring that the transition could be implemented systematically.

Table 2.

Planning Activities for Cashless Financial Management

Planning Component	Findings
Institutional policy	Mandatory use of RFID cashless system
Infrastructure	RFID cards, server, software, scanners
Human resources	Staff preparation and technical training
Stakeholder communication	Parent socialization and user orientation
Banking partnership	Integration with partner bank

As Table 2 summarizes, institutional planning involved multiple interconnected components rather than merely adopting digital technology. These planning activities

established the organizational readiness needed to implement cashless educational finance management.

Organizing Digital Financial Governance

Successfully implementing the cashless financial management system required organizational restructuring to ensure effective coordination among administrative units. Rather than assigning responsibility to a single department, Pondok Modern Nur El Haq established a collaborative governance structure involving institutional leaders, the finance office, information technology personnel, cooperative staff, student affairs officers, and banking partners. This organizational arrangement enabled the integration of financial administration, technological operations, and student services within a unified digital ecosystem.

Institutional leaders played a strategic role by formulating policies, supervising implementation, and ensuring that the cashless system aligned with the boarding school's financial objectives. The finance office handled operational responsibilities by managing students' financial records, verifying transactions, and coordinating with the partner bank on account administration and fund transfers. Meanwhile, the information technology administrator maintained the RFID infrastructure, monitored system performance, resolved technical issues, and ensured uninterrupted access to digital financial services.

The cooperative unit served as the primary operational center for students' daily cashless transactions. Students processed every purchase through RFID cards connected to the institutional database, allowing transaction records to synchronize automatically with the financial management system. Teachers and student affairs officers supported this process by supervising students' compliance with institutional financial regulations and helping students who encountered operational difficulties during daily transactions.

One administrator explained the importance of clearly assigning organizational responsibilities:

"The implementation of the cashless system cannot rely solely on the finance office. Every unit has its own responsibilities. The finance team manages the transactions, the IT administrator maintains the system, the cooperative staff process purchases, and school leaders supervise the overall implementation." (Administrator)

This statement illustrates that organizational effectiveness depended on interdepartmental collaboration rather than individual responsibility. Implementing digital financial management therefore required coordinated communication and clearly defined institutional roles to ensure operational continuity.

Coordination extended beyond internal organizational units to include external collaboration with the partner bank. Banking personnel supported account registration, payment verification, and electronic fund transfers, ensuring that financial transactions could be processed securely and efficiently. Regular coordination between the boarding school and the banking institution also facilitated system maintenance, problem resolution, and service improvement, contributing to the reliability of the cashless payment system.

Table 3 summarizes the organizational structure supporting cashless educational finance management.

Table 3.
Organizational Responsibilities in Cashless Educational Finance Management

Organizational Unit	Primary Responsibilities
School Director	Establish institutional policies, supervise implementation, and evaluate financial governance
Finance Office	Manage student accounts, verify transactions, prepare financial reports, and coordinate with the partner bank
IT Administrator	Maintain RFID infrastructure, monitor system performance, and resolve technical issues
Cooperative Staff	Process students' daily transactions and maintain transaction records
Student Affairs Officers	Supervise students' compliance and provide operational assistance
Partner Bank	Facilitate account services, electronic payments, and banking integration

As presented in Table 3, organizational responsibilities were distributed according to each unit's expertise, allowing managerial, technical, and operational functions to complement one another. This collaborative governance structure enhanced institutional capacity to implement cashless educational finance management while maintaining financial accountability, operational efficiency, and service continuity.

Operationalizing Cashless Transactions

The operational implementation of the cashless financial management system transformed how financial transactions were conducted at Pondok Modern Nur El Haq. After completing institutional planning and organizational preparation, the school integrated all student financial activities into an RFID-based cashless payment system connected to the partner bank. The system was designed to eliminate direct cash transactions while improving transaction efficiency, financial security, and administrative accuracy.

Each student received an RFID card linked to an individual financial account. Parents deposited funds into the designated account through the partner bank, after which the balance became immediately available for students' daily transactions. The RFID card functioned as the primary payment instrument for purchasing food, school supplies, and other essential items at the boarding school's cooperative store. Every transaction was automatically recorded in the institutional database, updating financial records in real time without manual bookkeeping.

A cooperative staff member described the operational procedure as follows:

"Students simply tap their RFID card at the cashier. The system immediately verifies the available balance, completes the payment, and automatically records the

transaction. This process is much faster and minimizes recording errors."
(Cooperative Staff)

Observational findings confirmed that the cashless transaction process significantly reduced waiting time during peak purchasing periods. Automated transaction recording also minimized the risk of calculation errors and eliminated the need for manual cash handling by cooperative staff. Consequently, operational efficiency improved while financial records became more accurate and readily accessible for administrative purposes.

Figure 1 illustrates the operational workflow of the cashless transaction system.

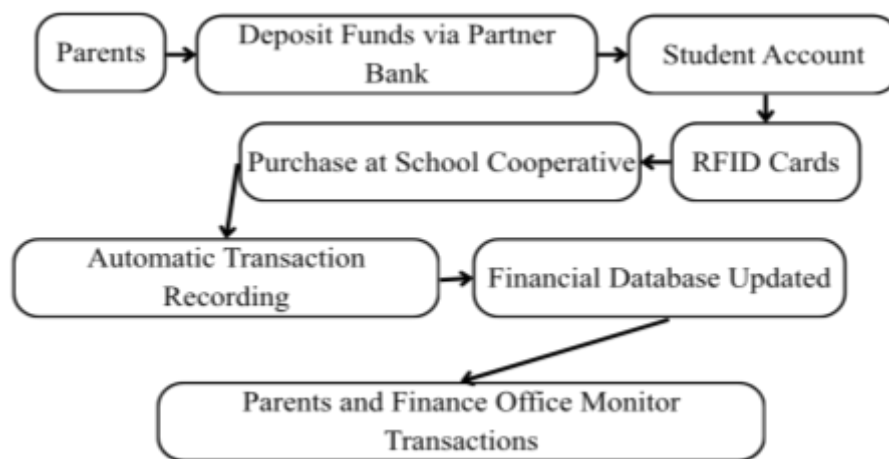


Figure 1. Operational Workflow of Cashless Transactions

Although participants generally perceived the operational system as effective, several implementation challenges were identified. Temporary internet disruptions occasionally delayed transaction verification, while newly enrolled students and some parents required additional assistance in understanding top-up procedures and account management. The team therefore conducted regular technical maintenance to ensure system stability and minimize service interruptions. One parent explained:

"Initially, I needed guidance on how to transfer funds and check the balance. However, after several transactions, the system became very easy to use because every payment was recorded automatically." (Parent)

The boarding school established technical support mechanisms involving the finance office, IT administrator, and cooperative staff to address these challenges. Staff assisted with account registration, balance inquiries, card replacement, and troubleshooting technical issues. Continuous coordination with the partner bank also ensured that operational problems were resolved promptly, maintaining uninterrupted financial services.

Table 4 summarizes the operational implementation of the cashless financial management system.

Table 4.
Operational Characteristics of the Cashless Transaction System

Operational Component	Implementation
Payment instrument	RFID card linked to individual student account
Fund transfer	Deposits made by parents through the partner bank
Transaction location	School cooperative and institutional service units
Transaction recording	Automatic real-time digital recording
Financial monitoring	Accessible by the finance office and parents
Technical support	Finance office, IT administrator, cooperative staff, and partner bank
Operational challenges	Internet instability, user adaptation, and technical maintenance

The findings indicate that operationalizing cashless transactions went beyond replacing physical cash with digital payments. Instead, the system established an integrated financial management process that combined automated transaction recording, real-time monitoring, stakeholder coordination, and continuous technical support. These operational characteristics strengthened institutional efficiency while providing a more transparent and accountable financial management system.

Monitoring and Financial Accountability

The final managerial component of the cashless educational finance management system involved continuous monitoring and financial accountability. Unlike conventional cash-based financial management, the digital system enabled institutional leaders to supervise financial transactions in real time through an integrated database. The system automatically recorded every student transaction, allowing administrators to monitor financial activities accurately while reducing the risk of human error, undocumented transactions, and financial discrepancies.

The finance office primarily monitored finances through a centralized digital dashboard that provided immediate access to students' account balances, transaction histories, and daily financial reports. This automated monitoring process enabled financial administrators to verify transaction accuracy, identify irregularities, and generate financial reports more efficiently than the previous manual recording system. As a result, financial supervision became more systematic, transparent, and data-driven.

The boarding school director emphasized the importance of digital monitoring in strengthening institutional financial governance:

"Previously, financial supervision relied heavily on manual records, making verification more time-consuming. With the cashless system, every transaction is automatically recorded, allowing us to monitor financial activities more accurately and make decisions based on real-time information." (School Director)

This statement indicates that implementing digital monitoring not only improved administrative efficiency but also enhanced managerial decision-making by providing reliable financial information. Real-time financial data enabled institutional leaders to respond more quickly to operational issues and strengthened accountability throughout the financial management process.

Another important aspect of monitoring involved parental access to students' financial transactions. Through the integrated cashless system, parents could monitor account balances and transaction histories, enabling them to supervise their children's spending without being physically present at the boarding school. This feature strengthened communication between parents and the institution while increasing confidence in the school's financial management practices. One parent explained:

"I can immediately see how much money my child spends and where the transactions take place. This makes me feel more confident because the financial information is transparent and easy to access." (Parent)

In addition to routine transaction monitoring, the institution implemented periodic evaluations of system performance. The finance office and IT administrator regularly reviewed transaction records, resolved technical issues, verified data consistency, and coordinated with the partner bank when operational problems occurred. These monitoring activities ensured that the digital financial system remained reliable and continued to support institutional financial services effectively.

Table 5 summarizes the monitoring mechanisms identified in this study.

Table 5.
Monitoring and Financial Accountability Mechanisms

Monitoring Component	Implementation	Contribution to Accountability
Real-time transaction recording	Automatic recording of every financial transaction	Reduces recording errors and improves transparency
Financial dashboard	Continuous monitoring by the finance office	Facilitates rapid verification and reporting
Transaction history	Digital archive of all financial activities	Supports financial auditing and traceability
Parent access	Monitoring of students' balances and expenditures	Strengthens transparency and stakeholder trust
Periodic system evaluation	Regular review by finance office and IT administrator	Ensures operational reliability and continuous improvement
Bank coordination	Verification of electronic transactions	Maintains financial security and service continuity

As presented in Table 5, monitoring within the cashless financial management system extended beyond routine financial supervision. The integration of automated

transaction records, digital reporting, stakeholder access, and periodic system evaluation created a comprehensive accountability mechanism that enhanced institutional transparency and strengthened financial governance. These findings show that digital financial monitoring contributes not only to administrative efficiency but also to building stakeholder trust through transparent, accountable financial management.

Stakeholders' Acceptance of the Cashless System

The implementation of the cashless financial management system was not only influenced by institutional policies and technological infrastructure but also by stakeholders' acceptance of the digital payment system. Analysis of interview and observational data revealed that students, parents, financial administrators, and school staff generally expressed positive attitudes toward the system after experiencing its practical benefits. Their acceptance was primarily linked to the system's perceived usefulness in improving financial management and the perceived ease of conducting daily financial transactions.

Perceived Usefulness

Participants consistently reported that the cashless system improved the efficiency and transparency of financial management. Financial administrators emphasized that automated transaction recording significantly reduced manual bookkeeping, minimized calculation errors, and sped up financial report preparation. Real-time financial information also enabled faster transaction verification and supported evidence-based financial decision-making. A finance officer stated:

"Since the implementation of the cashless system, financial reporting has become much easier because every transaction is automatically recorded. We no longer need to verify each payment manually." (Finance Officer)

Parents also perceived substantial benefits from the system. They appreciated being able to monitor their children's expenditures remotely through digital transaction records, allowing them to supervise spending without visiting the boarding school. This accessibility increased parents' confidence in the institution's financial management and strengthened communication between families and the school. One parent explained:

"The application allows me to know how much money my child spends every day. This helps me manage their allowance while also increasing my trust in the school's financial system." (Parent)

Students likewise recognized the practical advantages of the cashless system. They considered RFID-based payments faster than conventional cash transactions and appreciated the reduced need to carry large amounts of cash while living in the boarding school environment.

Perceived Ease of Use

Participants generally perceived the cashless payment system as easy to operate. Students quickly adapted to using RFID cards for daily transactions, while administrative staff reported that the digital platform simplified transaction verification and financial documentation. The operational procedures were considered straightforward because users only needed to tap the RFID card during purchases, after which the system automatically completed the payment and updated the transaction record. An IT administrator explained:

"The system was designed to be simple. Students only need to tap their RFID card, while administrators can immediately access transaction data through the management dashboard." (IT Administrator)

Despite these positive perceptions, several participants acknowledged initial challenges during implementation. Some parents struggled to understand electronic fund transfers and balance monitoring, particularly during the early adoption period. Occasional internet instability also delayed transaction verification, although these technical disruptions were generally temporary and resolved through routine system maintenance and technical support.

Continuous assistance provided by the finance office, IT personnel, and cooperative staff played an important role in helping users adapt to the digital financial environment. As users became more familiar with the operational procedures, their confidence and satisfaction with the system increased considerably, contributing to broader institutional acceptance of the cashless payment system.

Table 6 summarizes stakeholders' perceptions of the cashless financial management system.

Table 6.
Stakeholders' Acceptance of the Cashless Financial Management System

TAM Dimension	Empirical Findings	Representative Stakeholders
Perceived Usefulness	Faster transactions, automated financial recording, transparent reporting, improved financial monitoring	Finance Office, Parents, School Leaders
Perceived Ease of Use	Simple RFID operation, user-friendly procedures, accessible monitoring system	Students, IT Administrator, Cooperative Staff
Initial Challenges	Digital literacy differences, internet instability, adaptation to new procedures	Parents, Students
Institutional Support	Technical assistance, user guidance, continuous	Finance Office, IT Administrator

TAM Dimension	Empirical Findings	Representative Stakeholders
	system maintenance	

The findings indicate that both functional benefits and operational simplicity shaped stakeholders' acceptance of the cashless financial management system. While technical and adaptation challenges emerged during the early stages of implementation, these issues gradually diminished as users became familiar with the system and received continuous institutional support. Participants' positive perceptions suggest that technology acceptance played a significant role in facilitating the successful implementation of cashless educational finance management at Pondok Modern Nur El Haq.

Alignment with Islamic Financial Principles

Beyond improving managerial efficiency and technology adoption, the cashless financial management system strongly aligned with the ethical principles underpinning Islamic financial governance. Analysis of interviews, observations, and institutional documents indicated that the system supported the implementation of *amanah* (trustworthiness), *'adl* (justice), transparency, and accountability throughout the financial management process. These principles were reflected not only in institutional policies but also in the daily operation of digital financial transactions.

Amanah (Trustworthiness)

The principle of *amanah* was evident in the institution's commitment to safeguarding students' financial resources through a secure and well-controlled digital payment system. Unlike conventional cash transactions, the RFID-based system automatically recorded every financial activity, reducing the possibility of fund mismanagement, recording errors, or unauthorized transactions. Institutional leaders emphasized that digital transaction records strengthened their responsibility to manage students' funds with greater integrity and precision. A treasurer explained:

"Every transaction is automatically recorded in the system, so we are responsible for managing students' funds transparently and accurately. This strengthens the trust placed in us by parents." (Treasurer)

The automatic recording mechanism enabled financial administrators to verify transactions efficiently while ensuring that all financial activities could be traced whenever verification was required. Consequently, implementing the cashless system reinforced institutional trustworthiness by improving both financial control and administrative responsibility.

Justice ('Adl)

The findings also demonstrated the implementation of the principle of justice (*'adl*) through standardized financial procedures applied equally to all students. Every student used the same RFID card, followed identical transaction procedures, and accessed the

same financial services regardless of socioeconomic background. The standardized digital system minimized subjective treatment during financial transactions because it processed every payment automatically under institutional regulations. A school administrator stated:

"The system applies the same transaction procedures to every student. There is no difference in how payments are processed because everything follows the same digital procedure." (School Administrator)

Participants also noted that the digital system reduced the likelihood of administrative inconsistencies that occasionally occurred under manual financial management. Standardized electronic procedures therefore contributed to fairer financial services while supporting institutional consistency.

Transparency and Accountability

Transparency emerged as one of the study's most prominent findings. Digital transaction records enabled institutional leaders, finance officers, and parents to access accurate financial information in real time. The institutional database automatically documented every payment, purchase, and balance update, allowing continuous monitoring of financial activities without relying on manual reporting.

Parents found this transparency particularly valuable because it let them supervise their children's financial activities remotely. Access to transaction histories increased confidence in institutional financial management while strengthening communication between families and the boarding school. One parent commented:

"I can immediately check every transaction made by my child. This transparency makes me feel more confident because nothing is hidden, and every expenditure is clearly recorded." (Parent)

Digital documentation also strengthened institutional accountability by providing reliable evidence for financial reporting and internal evaluation. Financial administrators reported that preparing accountability reports became more efficient because transaction data were readily available in the digital system, reducing the administrative burden of manual documentation.

The findings show that implementing the cashless financial management system went beyond technological innovation. Digitalizing financial administration supported the realization of Islamic financial principles by strengthening trustworthiness, promoting fairness, enhancing transparency, and reinforcing accountability. These findings suggest that digital financial transformation within Islamic boarding schools can improve administrative performance while preserving the ethical values that underpin Islamic educational governance.

Discussion

The findings show that implementing cashless educational finance management at Pondok Modern Nur El Haq is more than adopting a digital payment system. Instead, it

reflects a comprehensive transformation of educational financial governance in which managerial processes, technology utilization, and ethical values operate in an integrated manner. The system's successful implementation was supported not only by digital infrastructure but also by institutional planning, organizational coordination, operational implementation, continuous monitoring, stakeholder acceptance, and adherence to Islamic financial principles. These findings suggest that digital transformation in educational finance should be understood as an organizational governance strategy rather than merely a technological innovation.

From the perspective of George R. Terry's POAC framework, the findings indicate that each managerial function contributed substantially to the effectiveness of the cashless financial management system. Strategic planning enabled the institution to formulate policies, allocate financial resources, establish partnerships with banking institutions, and prepare the technological infrastructure required for implementation. Organizing ensured that institutional leaders, finance officers, IT administrators, cooperative staff, and student affairs personnel shared responsibilities, creating coordinated governance to support daily financial operations. The implementation stage translated these managerial preparations into operational practices through RFID-based transactions, automated financial recording, and integrated digital services. Meanwhile, continuous monitoring through real-time financial reporting and automated transaction records strengthened institutional accountability and facilitated evidence-based managerial decision-making. Collectively, these findings reinforce the argument that digital financial transformation is fundamentally dependent on effective managerial governance rather than technological investment alone.

The findings also extend current discussions on educational finance management by demonstrating that organizational collaboration is a critical determinant of successful digital transformation. The integration of financial administrators, school leaders, technical personnel, cooperative management, and external banking partners created an interconnected governance structure that supported operational continuity and financial transparency. This collaborative arrangement confirms that digital financial management cannot be implemented effectively through isolated administrative efforts but requires institutional coordination across multiple organizational units (Sakeru et al., 2026; Tetteh et al., 2021; Zaytsev et al., 2021). Consequently, digital transformation should be viewed as an organizational change process involving governance restructuring, leadership commitment, and cross-functional collaboration.

Stakeholders' positive acceptance of the cashless financial management system further illustrates the importance of technology adoption in educational organizations. Consistent with the Technology Acceptance Model (TAM), participants perceived the system as both useful and easy to use (Davis et al., 2024). Automated financial recording, faster transactions, transparent reporting, and real-time monitoring enhanced perceived usefulness by improving administrative efficiency and reducing manual financial procedures (Kukman & Gričar, 2025; Nofel et al., 2024). Similarly, the simplicity of RFID-based transactions and user-friendly operational procedures contributed to stakeholders' perceptions of ease of use. Although several participants initially experienced challenges related to digital literacy and internet connectivity, these barriers gradually diminished through continuous technical support, user

guidance, and institutional assistance. These findings suggest that technology acceptance is influenced not only by the technical characteristics of the system but also by the quality of organizational support provided during implementation. This observation complements previous TAM studies by highlighting institutional readiness and ongoing technical assistance as important enabling factors in educational digital transformation (Alam et al., 2024; Marian et al., 2025; Veseli et al., 2025).

A key contribution of this study is its integration of Islamic financial principles into the analysis of digital educational finance management. While previous studies have generally examined digital payment systems from technological or managerial perspectives, the present findings show that implementing cashless financial management can strengthen the ethical foundations of financial governance within Islamic educational institutions. The principles of *amanah*, *'adl*, transparency, and accountability were reflected throughout the implementation process (Afifi et al., 2026; Septiawan & Katimin, 2026; Siswahyuningsih et al., 2025). Automated transaction recording strengthened trustworthiness by ensuring that financial activities were accurately documented and protected from manipulation. Standardized digital procedures promoted justice by providing equal financial services to all students regardless of their background. Real-time financial information enhanced transparency by enabling institutional leaders and parents to monitor financial activities continuously, while digital documentation reinforced accountability by facilitating reliable financial reporting and institutional evaluation.

These findings suggest that digital financial innovation does not replace Islamic ethical values but instead provides new mechanisms to implement those values more effectively. Integrating digital technology with Islamic financial principles shows that technological modernization and religious ethics are complementary rather than contradictory (Afdawaiza et al., 2024; Baharuddin, 2026; Wahab & Mahdiya, 2025). Within the context of Islamic boarding schools, digital financial governance therefore represents an opportunity to modernize institutional management while preserving the moral principles that underpin Islamic education.

Theoretically, this study contributes to the literature by proposing an integrated analytical perspective that combines managerial governance, technology acceptance, and Islamic financial ethics. Previous studies have typically employed these perspectives separately, emphasizing either managerial processes, users' acceptance of technology, or normative discussions of Islamic finance. By integrating the POAC framework, the Technology Acceptance Model, and Islamic financial principles in a single qualitative analysis, this study offers a more comprehensive explanation of how Islamic educational institutions implement, accept, and govern digital financial systems. This integrated perspective broadens current understanding of educational finance management and offers a conceptual framework for future studies investigating digital governance in religious educational settings.

Practically, the findings provide important implications for policymakers and educational leaders seeking to modernize financial management systems. Successfully implementing cashless educational finance management requires more than investment in digital infrastructure. Institutions should prioritize strategic planning, establish clear organizational responsibilities, provide continuous technical assistance, strengthen

collaboration with financial service providers, and ensure that digital financial practices remain consistent with institutional ethical values. This integrated approach is essential for developing transparent, accountable, and sustainable financial governance that can respond to the growing demands of educational digitalization.

Conclusion

This study examined the implementation of cashless educational finance management at Pondok Modern Nur El Haq by integrating the Planning, Organizing, Actuating, and Controlling (POAC) framework, the Technology Acceptance Model (TAM), and Islamic financial principles. The findings indicate that the cashless system represents a comprehensive transformation of educational financial governance, not merely the digitalization of payment transactions. The study achieved effective implementation through strategic planning, collaborative organizational structures, systematic operational procedures, and continuous monitoring, while stakeholders showed positive acceptance because of the system's perceived usefulness and ease of use. Furthermore, the implementation strengthened the Islamic financial principles of *amanah* (trustworthiness), *'adl* (justice), transparency, and accountability, demonstrating that digital financial innovation can support both managerial effectiveness and ethical governance within Islamic boarding schools.

This study contributes to the literature by proposing an integrated analytical perspective that combines managerial governance, technology acceptance, and Islamic financial principles in explaining digital educational finance management. Unlike previous studies that have generally examined these dimensions separately, the present study demonstrates that successful cashless financial management emerges from the interaction between effective managerial processes, stakeholder acceptance of technology, and adherence to Islamic ethical values. The findings also provide practical implications for educational leaders and policymakers by emphasizing that digital transformation requires not only technological infrastructure but also institutional readiness, cross-functional collaboration, continuous stakeholder support, and value-based financial governance.

This study is limited to a single Islamic boarding school, which may restrict the transferability of the findings to other educational contexts. Future research is encouraged to examine multiple Islamic boarding schools or other educational institutions using comparative case studies, or mixed-methods approaches to validate and refine the integrated framework proposed in this study. Such research would provide broader empirical evidence on implementing cashless educational finance management across diverse institutional settings.

Declaration of conflicting interest

Locus anonymity should be guaranteed, as the test result may be used inappropriately by irresponsible party(es).

References

Afdawaiza, Mas'ud, R., & Manulandong, S. Q. (2024). Islamic Banks in the Digital Age : Balancing Innovation with Sharia Principles. *IKONOMIKA: Jurnal Ekonomi*

- Dan Bisnis Islam*, 9(1), 33–50. <https://doi.org/10.24042/ijebe.v9i1.24912>
- Afifi, M. A., Perawironegoro, D., & Masduki, Y. (2026). Islamic Entrepreneurship-Based Business Governance in Pesantren: A Case Study of Amanah, Tabligh, and Fathanah at Pondok Pesantren Raudhatul Ulum Sakatiga. *Journal of Indonesian Progressive Education*, 3(1), 204–209. <https://doi.org/10.63617/jipe.v3i1.203>
- Alam, S. S., Ahmed, S., & Kokash, H. A. (2024). Interplay of Perceived Organizational and External E-Readiness in the Adoption and Integration of Augmented Reality and Virtual Reality Technologies in Malaysian Higher Education Institutions. *Education and Information Technologies*, 29(11), 13735–13761. <https://doi.org/10.1007/s10639-023-12428-7>
- Almadadha, R. (2024). Blockchain Technology in Financial Accounting: Enhancing Transparency, Security, and ESG Reporting. *Blockchains*, 2(3), 312–333. <https://doi.org/10.3390/blockchains2030015>
- Amelia, R., & Karim, H. A. (2025). The Importance of Education Financing Management in Islamic Institution. *FiTUA: Jurnal Studi Islam*, 6(1), 39–47. <https://doi.org/10.47625/fitua.v6i1.1013>
- Anggareka, A. (2024). Implementation of Transparency and Accountability in Financial Management of Village Fund Allocations 2022 in Pandai Village, Woha District Bima Regency. *GOODWILL: Journal of Economics, Management, and Accounting*, 4(1), 44–54. <https://doi.org/10.65246/95rq4s83>
- Ardiputra, S., Milyan, M., Akhmad, Z., Sulthan, M., & Ardiputra, M. A. (2025). Optimizing Budget Policy in Village Fund Allocation (ADD): A Governance and Public Administration Perspective on Rural Development. *Frontiers in Political Science*, 7(July), 1–16. <https://doi.org/10.3389/fpos.2025.1581806>
- Ashok, P., & Hallur, G. (2024). Seamless Mobility: Innovating the Digital Service Landscape in Telecom Industry. In S. Tanwar, P. K. Singh, M. Ganzha, & G. Epiphaniou (Eds.), *Proceedings of Fifth International Conference on Computing, Communications, and Cyber-Security* (pp. 177–188). Springer Nature Singapore. https://doi.org/10.1007/978-981-97-2550-2_14
- Baharuddin, M. (2026). Bridging Islamic Technological Heritage with Modern Innovations: Ethical and Practical Perspectives Madiha Baharuddin. *Journal of Al-Tamaddun*, 21(3), 71–94. <https://doi.org/10.22452/JAT.vol21no1.5>
- Davis, F. D., Granić, A., & Marangunić, N. (2024). *The Technology Acceptance Model: 30 Years of TAM*. Springer International Publishing AG.
- Dhanasekaran, S. (2026). Real-Time Payments as Market Intelligence. *Future Business Journal*, 12(1), 1–12. <https://doi.org/10.1186/s43093-026-00758-0>
- Gammelgaard, B. (2017). Editorial: The Qualitative Case Study. *The International Journal of Logistics Management*, 28(4), 910–913. <https://doi.org/10.1108/IJLM-09-2017-0231>
- Go, R. Y., Aini, N., Mutiarani, T., Yolanda, R. O., & Sarbinny, N. (2025). The Role of Digital Payment Technology in Improving Retail Operational Efficiency: A Review. *KERNEL: Jurnal Riset Inovasi Bidang Informatika Dan Pendidikan Informatika*, 6(1), 43–51. <https://doi.org/10.31284/j.kernel.2025.v6i1.7774>
- Hidayah, Z. A., Fauzi, A., & Mustofa, A. (2025). Digitalization of Madrasah Financial System in Managing Financial Transparency and Accountability. *Fikroh: Jurnal*

- Pemikiran Dan Pendidikan Islam*, 18(1), 34–42.
<https://doi.org/10.37812/fikroh.v18i1.1730>
- Khan, S., Tailor, R. K., Pareek, R., Gujrati, R., & Uygun, H. (2022). Application of Robotic Process Automation in Education Sector. *Journal of Information and Optimization Sciences*, 43(7), 1815–1834.
<https://doi.org/10.1080/02522667.2022.2128534>
- Kukman, T., & Gričar, S. (2025). Blockchain for Quality: Advancing Security, Efficiency, and Transparency in Financial Systems. *FinTech*, 4(1), 1–19.
<https://doi.org/10.3390/fintech4010007>
- Marian, A., Apostolache, R., & Ceobanu, C. M. (2025). Toward Sustainable Technology Use in Education: Psychological Pathways and Professional Status Effects in the TAM Framework. *Sustainability*, 17(15), 1–23.
<https://doi.org/10.3390/su17157025>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. SAGE Publications.
https://books.google.co.id/books/about/Qualitative_Data_Analysis.html?id=3CNrUbTu6CsC&redir_esc=y
- Nasir, M. H. M., Mohamad, R., & Saad, R. A. J. (2025). Managing Zakat Funds through Technological Integration: A Case Study of MyIPIZ Grants System for Institute of Research and Zakat Innovation (IPIZ) at Universiti Utara Malaysia (UUM). *Architectural Image Studies*, 6(4), 341–353.
- Nofel, M., Marzouk, M., Elbardan, H., Saleh, R., & Mogahed, A. (2024). From Sensors to Standardized Financial Reports: A Proposed Automated Accounting System Integrating IoT, Blockchain, and XBRL. *Journal of Risk and Financial Management*, 17(10), 1–30. <https://doi.org/10.3390/jrfm17100445>
- Priyanggani, W., Munastiwi, E., & Fitri, N. (2026). Digitalization of School Financial Management: An Analysis of the Effectiveness of E-Money in Supporting Modern Administration. *STUDIA MANAGERIA: Jurnal Manajemen Pendidikan Islam*, 8(1), 71–82. <https://doi.org/10.19109/studiamanageria.v8i1.36068>
- Putrevu, J., & Mertzanis, C. (2023). The Adoption of Digital Payments in Emerging Economies: Challenges and Policy Responses. *Digital Policy, Regulation and Governance*, 26(5), 476–500. <https://doi.org/10.1108/DPRG-06-2023-0077>
- Riinawati, R. (2022). Strategy of Financing Management to Improve the Quality of Islamic Education Institution. *AL-ISHLAH: Jurnal Pendidikan*, 14(3), 2757–2768.
<https://doi.org/10.35445/alishlah.v14i3.1519>
- Robinson, R. S. (2023). Purposive Sampling. In F. Maggino (Ed.), *Encyclopedia of Quality of Life and Well-Being Research* (pp. 5645–5647). Springer International Publishing. https://doi.org/10.1007/978-3-031-17299-1_2337
- Sakeru, O., Putera, R. E., & Karnedi. (2026). Village Fund Policy Implementation and the Effectiveness of Financial Management in Matobe Village. *PUBLIKA: Jurnal Ilmu Administrasi Publik*, 12(2), 351–368.
<https://doi.org/10.25299/jiap.2026.28457>
- Sari, P. M., & Sunhaji. (2025). Integrasi Nilai Amanah, Akuntabilitas, dan Transparansi dalam Manajemen Keuangan Pendidikan Islam di Era Digital. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(04), 292–306.

- <https://doi.org/10.23969/jp.v10i04.38822>
- Septiawan, W., & Katimin. (2026). The Role of Nahdlatul Ulama in Promoting Government Transparency and Accountability in North Sumatra: An Islamic Political Thought Perspective. *Sosioedukasi: Jurnal Ilmiah Ilmu Pendidikan Dan Sosial*, 15(3), 750–760. <https://doi.org/10.36526/sosioedukasi.v15i3.9260>
- Sholihun, M., Sirojuddin, M., Mulyani, S., Wijaya, M. Y., & Karabaevna, I. Z. (2026). Digital Payment Integration and Financial Control in Large Educational Institutions: A Qualitative Case Study of an Islamic Boarding School Ecosystem. *Sharia Economic and Management Business Journal (SEMBJ)*, 7(2), 251–260. <https://doi.org/10.62159/sembj.v7i2.2132>
- Siswahyuningsih, Z., Ambarawadi, N., Jaswadi, Aziz, A., & Efendi, N. (2025). Leading with Prophetic Integrity: Strengthening Islamic Education through Shiddiq, Amanah, and Fathanah. *MANAGERE: Indonesian Journal of Educational Management*, 7(2), 224–235. <https://doi.org/10.52627/managere.v7i2.868>
- Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital Financial Inclusion: A Gateway to Sustainable Development. *Heliyon*, 8(6), 1–10. <https://doi.org/10.1016/j.heliyon.2022.e09766>
- Terry, G. R. (2021). *Dasar-Dasar Manajemen Edisi Revisi*. Bumi Aksara. <https://books.google.co.id/books?hl=id&lr=&id=-6UmEAAQBAJ>
- Tetteh, L. A., Agyenim-Boateng, C., Simpson, S. N. Y., & Susuawu, D. (2021). Public Sector Financial Management Reforms in Ghana: Insights from Institutional Theory. *Journal of Accounting in Emerging Economies*, 11(5), 691–713. <https://doi.org/10.1108/JAEE-06-2020-0134>
- Veseli, A., Hasanaj, P., & Bajraktari, A. (2025). Perceptions of Organizational Change Readiness for Sustainable Digital Transformation: Insights from Learning Management System Projects in Higher Education Institutions. *Sustainability*, 17(2), 1–21. <https://doi.org/10.3390/su17020619>
- Vettriselvan, R., Rajesh, D., Swadhi, R., Velmurugan, P. R., & Arunkumar, S. (2025). Enhancing Efficiency and Accountability: Innovative Approaches to Public Financial Management in Higher Education. In *Challenges of Public Administration Management for Higher Education* (pp. 81–112). IGI Global Scientific Publishing. <https://doi.org/10.4018/979-8-3693-4346-3.ch005>
- Wahab, A., & Mahdiya, I. (2025). Digital Shariah Governance and the Future of Islamic Finance: A Framework for AI-Driven Shariah Compliance in a Global Regulatory Environment. *International Journal of Islamic Finance*, 03(02), 19–31. <https://doi.org/10.14421/ijif.v3i2.2777>
- Zahirah, S. Y., & Suhaedi, W. (2025). Optimizing Financial Management and Reporting to Increase Accountability and Transparency in Islamic Boarding Schools. *Journal of Islamic Economics Lariba*, 11(1), 25–44. <https://doi.org/10.20885/jielariba.vol11.iss1.art2>
- Zaytsev, A. A., Blizkyi, R. S., Rakhmeeva, I. I., & Dmitriev, N. D. (2021). Building a Model for Financial Management of Digital Technologies in the Areas of Combinatorial Effects. *Economies*, 9(2), 1–15. <https://doi.org/10.3390/economies9020052>
- Zhukabayeva, T., Baumuratova, D., Zholshiyeva, L., Karabay, A., & Abdrakhmanov,

K. (2025). Digital Transformation in Higher Education: Toward a National Model of Digital University in Kazakhstan Through Global and Local Comparison. *Sustainability*, 17(24), 1–31. <https://doi.org/10.3390/su172411132>