Journal of Emerging Information Systems and Business Intelligence
ISSN: 2774-3993
Journal homepage: https://ejournal.unesa.ac.id/index.php/JEISBI/

Design and Development of Financial Reporting Information System for Taman Pendidikan Alquran Governance

Achmad Asrori[1], I Kadek Dwi Nuryana[2]

[1,2] *State University of Surabaya, Surabaya, Indonesia*

achmad.19088@mhs.unesa.ac.id, dwinuryana@unesa.ac.id

ABSTRACT

The Al-Qur'an Education Park (TPQ) plays a significant role in shaping character and understanding of Islam from an early age. However, TPQ financial management is typically conducted manually, increasing the risk of recording errors, lack of transparency, and difficulties in decision-making. This study aims to develop a computerized financial reporting information system for more effective and efficient TPQ governance in accordance with the Ministry of Religious Affairs (Kemenag) standards. The prototype method is used in system development, allowing for iterative improvements based on user feedback. The system is designed to record financial transactions, generate financial reports, and present relevant financial information for TPQ administrators. System testing is conducted using the black-box method to evaluate functionality from the user's perspective and the white-box method to examine the internal structure and logic. This study demonstrates that the financial reporting information system improves the accuracy, efficiency, and transparency of TPQ financial management in compliance with Kemenag standards. Additionally, the system facilitates financial analysis and better decision-making for administrators. Therefore, this system is expected to contribute to the overall improvement of TPQ governance.

Keywords: Information System, Financial Reporting, Governance, Taman Pendidikan Alquran (TPQ), Prototype, Blackbox Testing, Whitebox Testing, kemenag standard

Article Info:
Article history:
Received March 16, 2025
Revised Februrary 07, 2026
Accepted May 25, 2026

Corresponding Author
Achmad Asrori
State University of Surabaya, Surabaya, Indonesia
achmad.19088@mhs.unesa.ac.id

1. INTRODUCTION

The rapid development of Information and Communication Technology (ICT) has significantly impacted various aspects of the education sector. The modern era's fast-paced changes have indirectly driven major transformations, accelerating innovation and optimizing the implementation of technology in education (Suradji M, 2018). By 2020, ICT had become a standard tool for simplifying various administrative tasks in offices (Islami & Ramadhani, 2021). In educational institutions, information technology covers various areas, including financial management, attendance data management, payroll management, and more. Among these, financial management is a crucial aspect that must be handled accurately and efficiently (Wahyudi, F., 2020).

In the financial sector, both in companies and educational institutions, the implementation of financial information processing systems is essential. These systems provide a practical method for generating reliable data and information while enhancing time and cost efficiency in obtaining or processing data in companies, institutions, and organizations. However, some organizations still lack efficiency and effectiveness in financial information management due to the absence of computerized systems. Consequently, manual financial processing requires more time and effort, increases human error in data entry, and leads to frequent data loss.

One such institution still relying on manual financial management is the Al-Qur'an Education Park At-Taqwa, located in Perum Karah Indah I No.10 Karah, Jambangan District. This study was motivated by empirical problems identified by the researchers regarding financial data management in educational institutions. The financial challenges faced by this institution include financial transactions, tuition fee payments, transaction recording, and financial reporting—all of which are still conducted manually. This traditional approach often results in data entry errors, data loss, and the inability to generate real-time financial reports. Additionally, financial records in the institution's ledger are unstructured, and transactions such as book sales, uniforms, and furniture purchases frequently suffer from incorrect or missing entries.

Currently, financial report preparation in this institution relies on physical archives, leading to prolonged processing times and an increased risk of data loss in case of disasters. Furthermore, since this institution operates under the Ministry of Religious Affairs, it must submit quarterly reports related to financial matters, teacher and student data, and educational activities to the local Religious Affairs Office.

Based on interviews and analysis, the researchers propose designing and developing a computerized financial accounting information system to address these issues. This system is expected to facilitate detailed bookkeeping and serve as the foundation for this research, culminating in a thesis titled "Design and Development of a Financial Reporting Information System for the Governance of Al-Qur'an Education Park (TPQ)."

2. METHODS

This study employs a qualitative approach by designing a financial reporting information system that aligns with Kemenag standards to address issues at TPQ At-Taqwa. The research adopts a web-based prototype development method, which includes several stages:

1. User Requirements Analysis: Includes business process design, flowcharts, context diagrams, and Data Flow Diagrams (DFD).
2. Prototype Development: Involves designing a Work Display Sheet (LKT) for the system.
3. System Implementation: Covers the actual development of the system.
4. System Testing: Conducted using the Black-box Testing method.

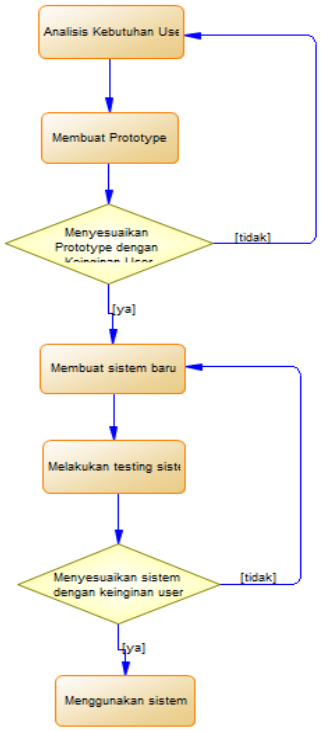


Figure 1 Research Design

2.1 Bussiness Process Flow

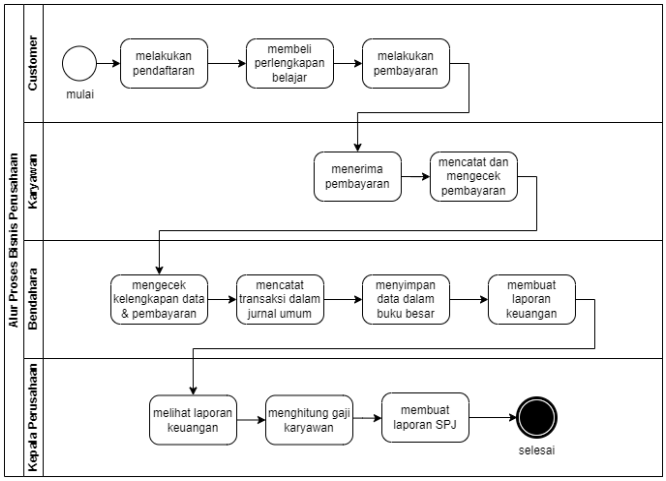


Figure 2 Bussiness Process Flow

The activity diagram illustrates the workflow of the financial reporting information system, involving customers, staff, the treasurer, and the head of the institution. The process begins with customers registering, purchasing learning materials, and making payments. Staff then receive and verify these payments, record transactions in the general journal, and ensure data completeness. Subsequently, the treasurer stores data in the ledger and prepares financial reports. Finally, the head of the institution reviews the reports, calculates employee salaries, and generates the SPJ report, completing the process.

2.2 Acess rights allocation

The web-based Accounting Information System application is divided into 3 users, namely: Treasurer, Admin, and Business Owner.

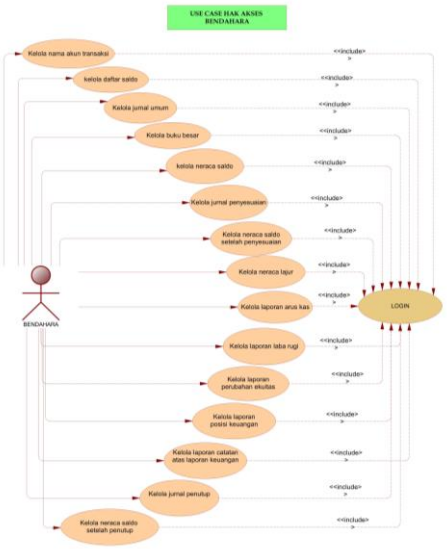


Figure 3 Treasurer's Access Rights

This Use Case diagram illustrates the access rights and functions available to the Treasurer actor within the financial reporting information system. The Treasurer is authorized to manage various components of financial reports, including managing the balance list, general journal, ledger, trial balance, as well as financial statements such as cash flow reports, income statements, changes in equity, financial position, and notes to the financial statements. Each function requires a login process as an authentication step to ensure the security and validity of access.

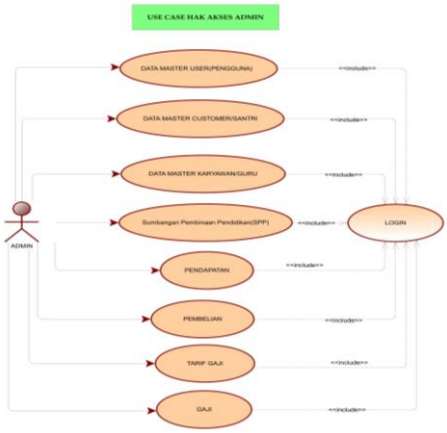


Figure 4 Admin Access Rights

This Use Case diagram illustrates the access rights and functions available to the Admin actor within the financial reporting information system. The Admin is authorized to manage master data of users, customers/students, and employees/teachers, as well as financial data such as educational development contributions (SPP), revenue, purchases, salary rates, and payroll. All these functions require a login process as an authentication step to maintain system security and ensure access validity.

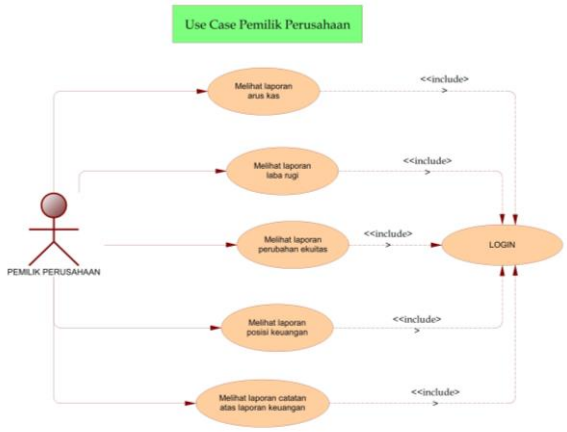


Figure 5 Company Owner's Access Rights

The use case diagram of the Institution Owner illustrates the interaction between the Institution Owner as an actor and the financial reporting information system, which functions to provide institutional financial information. All system features require users to complete a login process beforehand to ensure security and restrict access rights to financial data. After successful authentication, the Institution Owner can access various financial reports, including cash flow reports, income statements, statements of changes in equity, statements of financial position, and notes to the financial statements.

2.3 Proposed DFD Design

1. Context Diagram or DFD Level 0

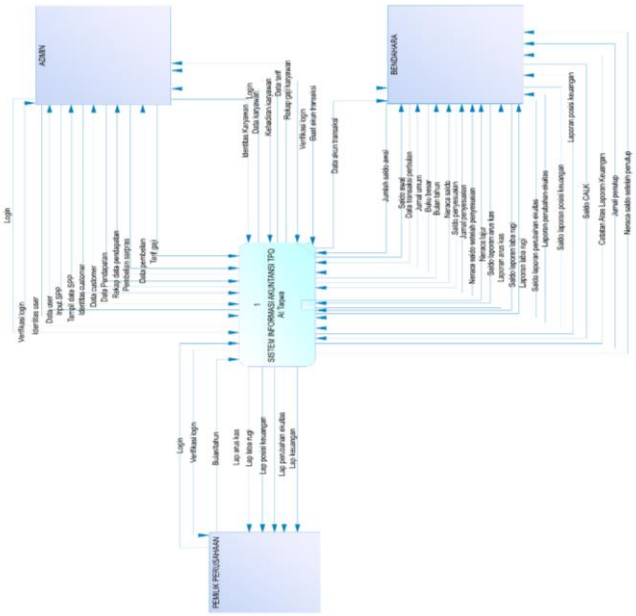


Figure 6 DFD Level 0

Data Flow Diagram (DFD) Level 0 of the Financial Reporting System of TPQ At-Taqwa, describing the interaction and data exchange between the system and three external entities: Admin, Treasurer, and Institution Owner. The Admin is responsible for maintaining and managing system-related data, while the Treasurer handles the recording and processing of financial transactions. The Institution Owner utilizes the

generated financial reports to support managerial decision-making. The system serves as the core platform that processes financial data and produces comprehensive and integrated financial reports.

2. Data Flow Diagram Level 1

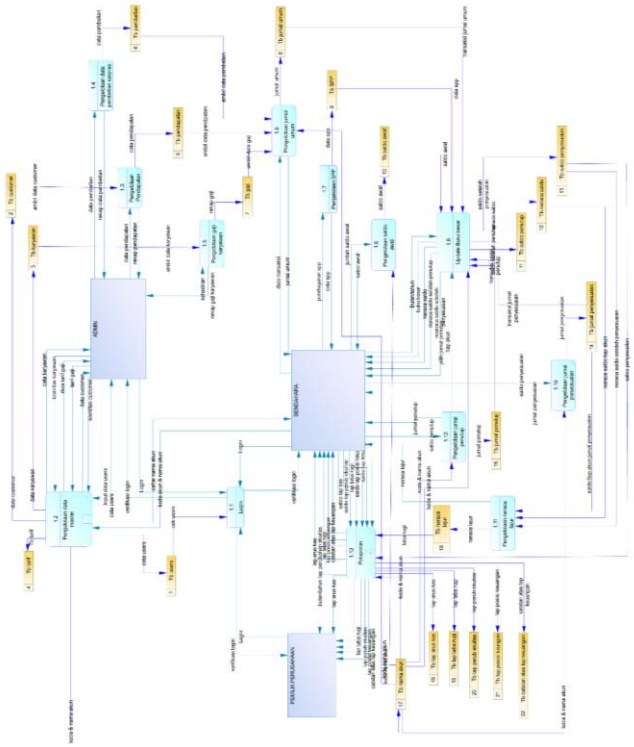


Figure 7 DFD Level 1

Data Flow Diagram (DFD) Level 1 of the Financial Reporting System of TPQ At-Taqwa, which provides a more detailed description of the financial data processing within the system. The diagram illustrates the data flow between external entities, namely the Admin, Treasurer, and Institution Owner, and several system processes, including user data management, account management, financial transaction recording, and financial report generation.

Each process receives input data, performs data processing, and produces outputs in the form of stored database information and financial reports utilized by the Institution Owner. This diagram demonstrates that the system integrates financial data management processes in a structured and systematic manner.

3. Data Flow Diagram Level 2 Master Data Management Process

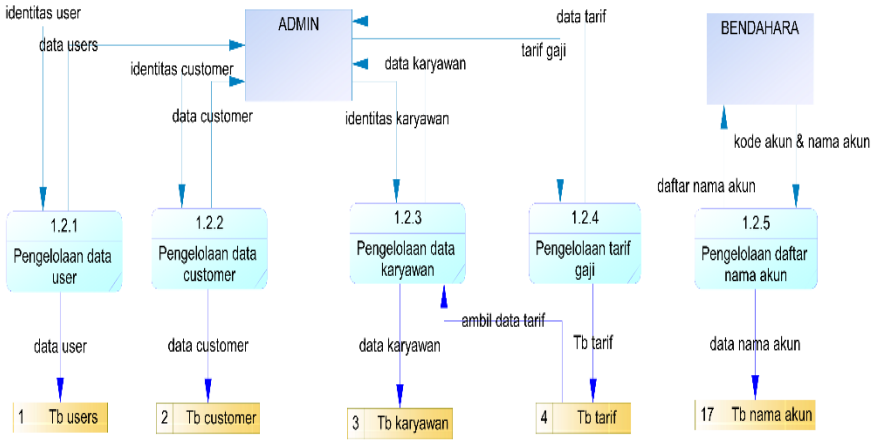


Figure 8 DFD Level 2 Master Data Management

Data Flow Diagram (DFD) Level 2 of the Admin process in the Financial Reporting System of TPQ At-Taqwa. The diagram describes the detailed data processing activities performed by the Admin, including user data management, customer data management, employee data management, salary rate management, and account name management.

The Admin receives and processes data from external entities and stores the processed data into respective database tables, such as user tables, customer tables, employee tables, salary rate tables, and account name tables. This process ensures that master data used in financial transactions and reporting is properly maintained and organized within the system.

4. Data Flow Diagram Level 2 Reporting Process

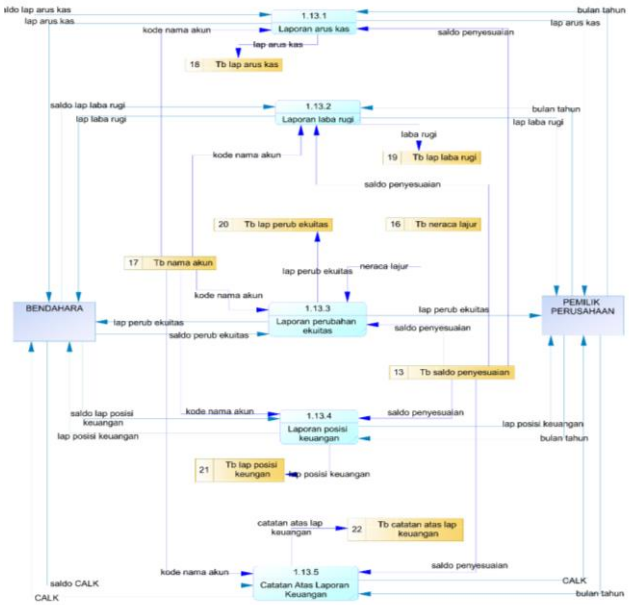


Figure 9 DFD Level 2 Reporting Process

Data Flow Diagram (DFD) Level of the financial report generation process in the Financial Reporting System of TPQ At-Taqwa. The diagram describes detailed

processes for generating financial reports, including cash flow reports, income statements, statements of changes in equity, statements of financial position, and notes to financial statements.

The Treasurer is responsible for processing financial data and preparing reports using data stored in several database tables, such as account name tables, trial balance tables, adjustment balance tables, and financial report tables. The generated reports are then delivered to the Institution Owner as financial information for monitoring and decision-making purposes. This process ensures that financial reporting is conducted systematically, accurately, and in an integrated manner within the system.

2.4 Prosed CDM dan PDM Design

1. Prosed Conceptual Data Model (CDM)

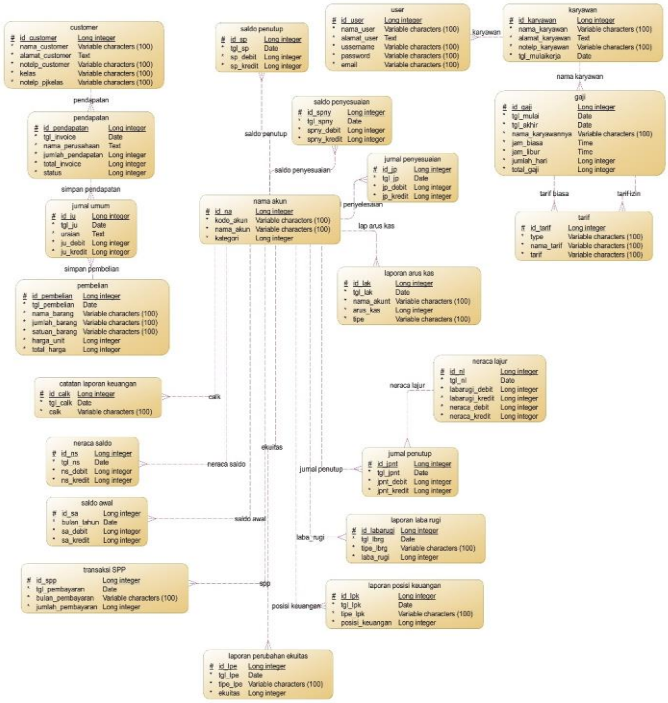


Figure 10 Prosed Conceptual Data Model

The Entity Relationship Diagram (ERD) that represents the database structure of the Financial Reporting System of TPQ At-Taqwa. The diagram describes the relationships among entities used in managing user data, transaction records, account data, and financial reporting data. Each entity is interconnected to support integrated data storage and processing, enabling the system to produce structured and consistent financial information.

2. Proposed Physical Data Model (PDM)

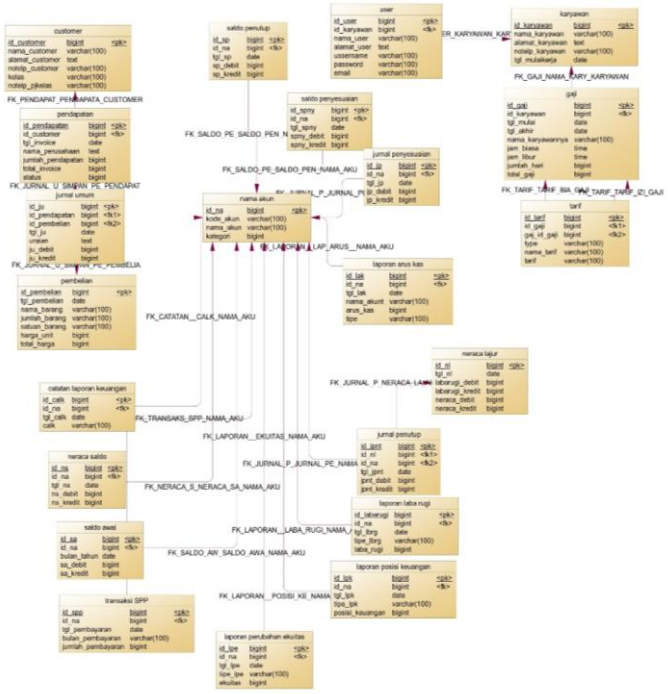


Figure 11 Proposed Physical Data Model (PDM)

The Entity Relationship Diagram (ERD) illustrating the database design of the Financial Reporting System of Taman Pendidikan Qur'an At-Taqwa. The diagram describes the relationships among entities involving user data, employee data, customer data, financial transactions, and financial reporting data. The relationships between tables are designed to support integrated data storage, processing, and presentation, enabling the system to generate accurate and well-structured financial reports.

3. RESULTS AND DISCUSSION

The following is an explanation of the results and discussion of the Financial Reporting Information System website application that has been developed and used by the Administrator, Company Owner, and Relevant Employees**.**

1. Administrastor page

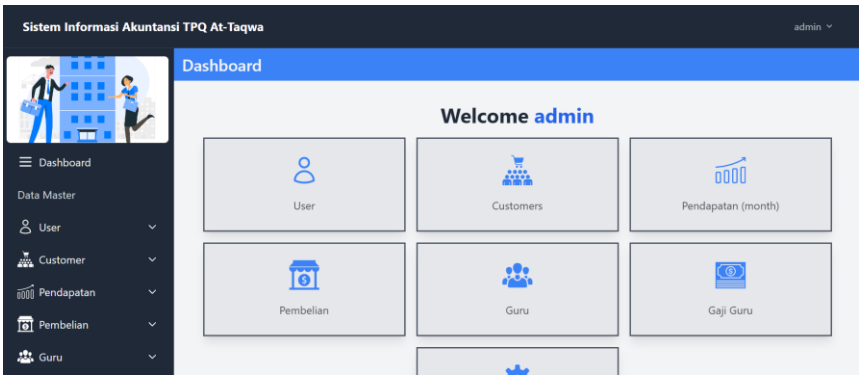


Figure 1 Administrator Page Display

The Dashboard interface that provides an overview of system information and main features accessible to the admin. This interface displays summary menus, including user management, customer data, revenue records, purchase transactions, teacher data, and teacher salary information, which support efficient monitoring and management of institutional activities.

2. Application Master User Data

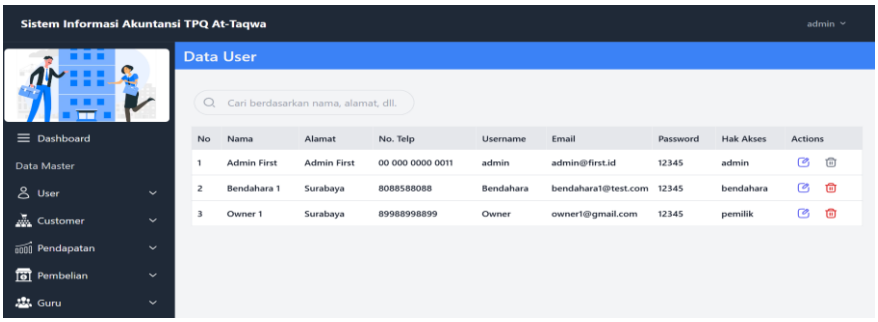


Figure 2 Application Master User Data Display

The User Data interface that displays a list of registered users within the system. This interface provides information such as name, address, phone number, username, email, password, and access rights. It also allows administrators to manage user data, including adding, editing, and deleting user information to support system administration.

3. Master Customer Data (Student)

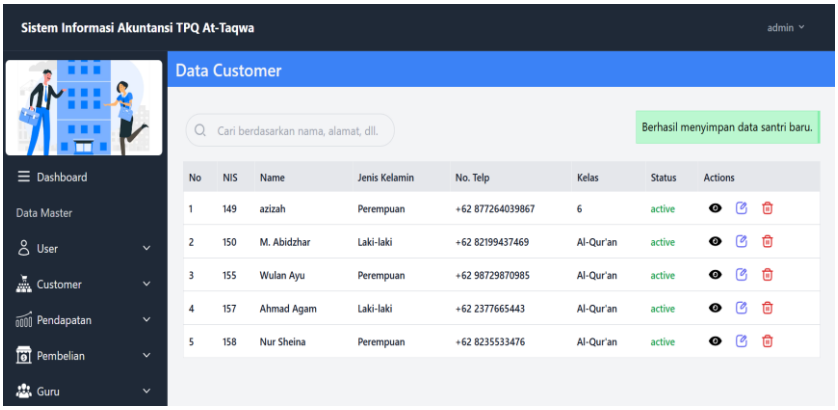
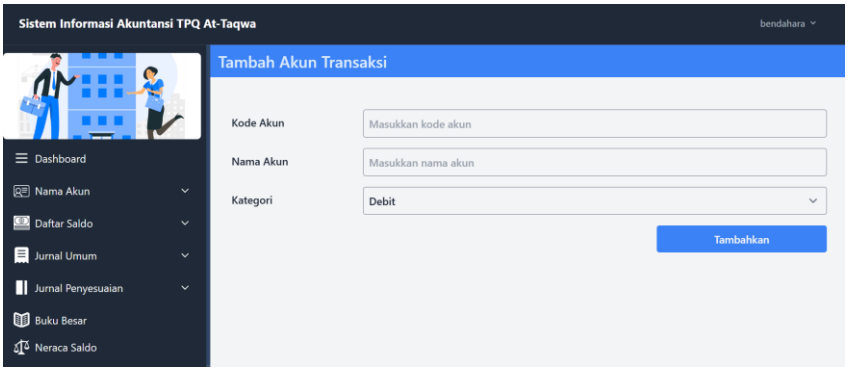


Figure 3 Student Data Display

The Customer Data interface that displays a list of registered students within the system. This interface provides information such as student identification number, name, gender, phone number, class, and status. It also allows administrators to manage student data, including viewing, editing, and deleting information to support data management and monitoring.

4. Add Treasurer Transaction Account

The Add Transaction Account interface that allows users to input new account data by entering the account code, account name, and account category. This interface supports proper account classification and helps maintain accuracy in recording financial transactions.



Fugure 4 Add Transaction Account Display

5. Cash Flow Financial Report

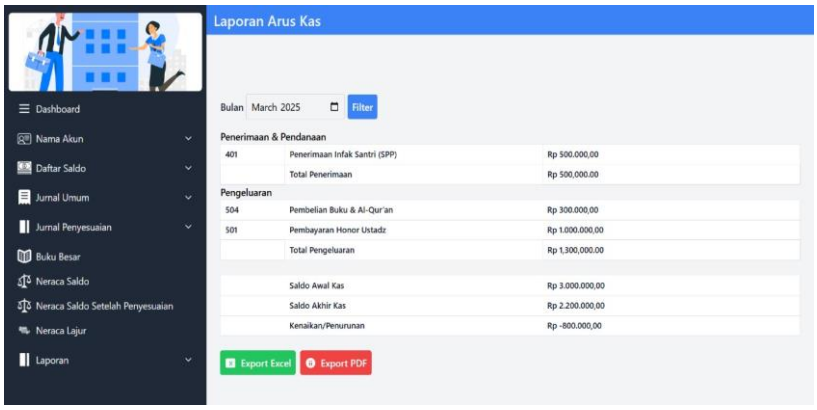


Figure 5 Cash Flow Financial Report Display

The Cash Flow Statement interface of the TPQ At-Taqwa Accounting Information System, which presents cash inflows, cash outflows, and changes in cash balance based on the selected reporting period. This report helps management monitor the institution's cash flow activities.

6. Incame Statement Report

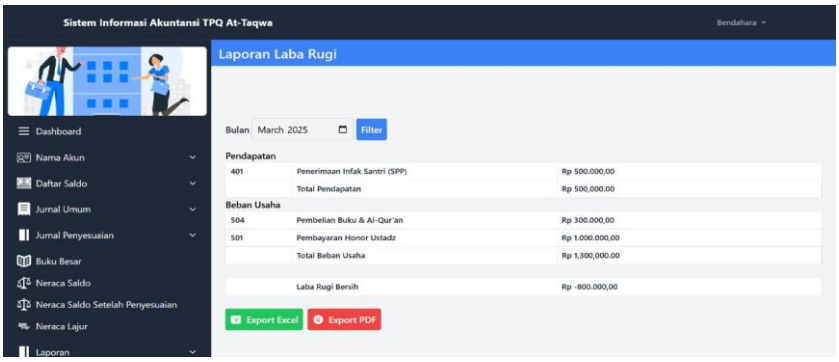


Figure 6 Income Statement Report Display

The Income Statement interface of the TPQ At-Taqwa Accounting Information System, which presents revenue data, operating expenses, and net profit or loss based on the selected reporting period. This report assists management in monitoring the institution's financial performance.

7. Trial Balance Interface of the Financial Report

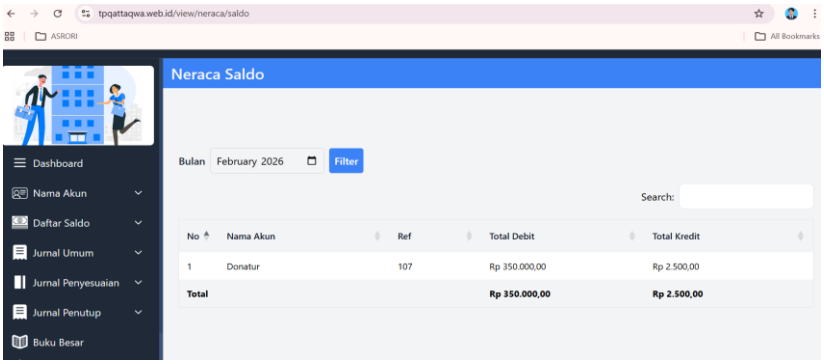


Figure 7 Trial Balance Interface of the Financial Report Display

The Trial Balance interface that displays account balances based on the selected reporting period. The interface presents debit and credit totals for each account to support the financial reporting process.

8. Statement of Changes in Equity

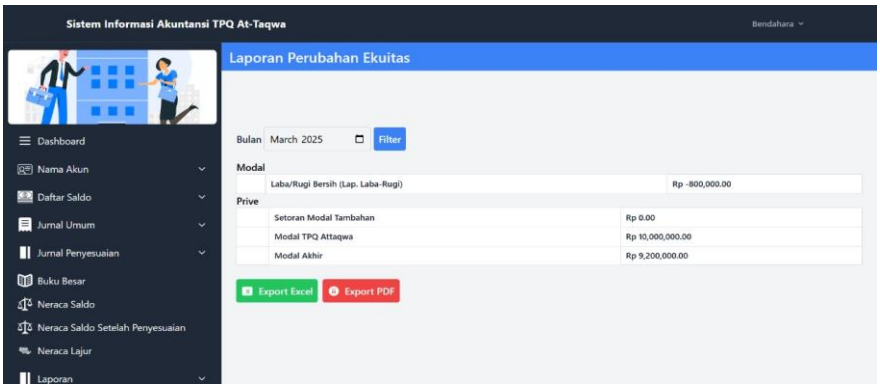


Figure 8 Equity Changes Financial Report Display

The Statement of Changes in Equity interface that displays information on equity changes, including net profit or loss, additional capital contributions, and ending capital balance based on the selected reporting period. This interface provides a clear overview of equity movement to support financial evaluation and decision-making. Furthermore, the report can be downloaded in Excel and PDF formats to facilitate reporting and documentation.

9. Financial Position Report

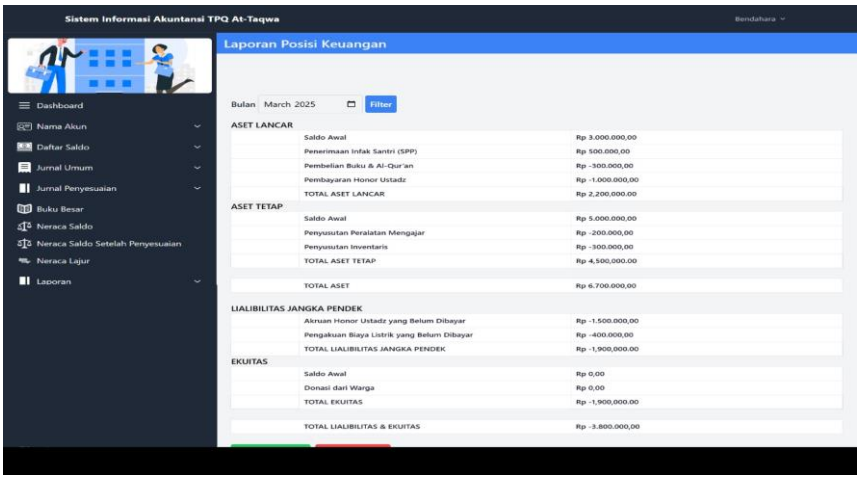


Figure 12 Financial Position Report Display

The Statement of Financial Position interface that displays financial data consisting of current assets, fixed assets, short-term liabilities, and equity based on the selected reporting period. This interface provides an overview of the institution's financial condition to support monitoring and decision-making processes. In addition, the report can be downloaded in Excel and PDF formats to facilitate reporting and documentation.

10. Notes to Financial Statements (CALK)



Figure 13 Notes to Financial Statements (CALK) Display

The Notes to Financial Statements (CALK) interface that presents additional financial information based on the selected reporting period. This feature allows users to review detailed account information and supports the preparation of comprehensive financial reports.

CONCLUSION

Based on the results of the research and system testing, it can be concluded that the developed web-based financial reporting information system operates in accordance with the design objectives and user requirements. The system is capable of improving the efficiency of financial recording and reporting processes, enhancing data accuracy, and supporting transparency in the financial management of TPQ At-Taqwa Institution.

The system development was carried out using the *prototype* method, which enables active user involvement at every stage of the development process, from requirements analysis to system evaluation. This approach resulted in a system that is more adaptive to user needs and easy to use by the financial management personnel of TPQ At-Taqwa Institution.

In terms of accounting standard implementation, the system was designed in accordance with the financial standards of the Ministry of Religious Affairs, referring to the Regulation of the Minister of Finance of the Republic of Indonesia Number 222/PMK.05/2016 concerning Guidelines for the Preparation of Financial Statements of Ministries/Agencies. Furthermore, the preparation of financial reports within the system is aligned with Government Regulation Number 71 of 2010 concerning Government Accounting Standards (SAP) and the principles of sound public financial management.

With the application of these standards, the developed information system not only fulfills functional and technical requirements but also ensures compliance with applicable regulations. Therefore, the system is considered feasible for implementation as a supporting tool for financial reporting at TPQ At-Taqwa Institution and has the potential to be further developed to support data consistency and managerial decision-making.

REFERENCES

[1] Islami, A. A., dan Ramadhani, S. 2021. “Rancang Bangun Sistem Pendataan Hardware”. Jurnal Teknologi Dan Sistem Informasi Bisnis, Vol 3(2): hal 412–418.

[2] Masruri, Ali Hapsi dan Rosadi imron kemas. 2021. “Pengelolaan Keuangan dalam Mempertahankan Kualitas Pondok Pesantren Selama Pandemi Covid-19”. Jurnal Ilmu Manajemen Terapan. Vol 2:hal 664-657

[3] Susanto Sasmita Eri, Hamdani Fahri dan Tari Yuyun. 2020. “Sistem Informasi Administrasi Keuangan Sekolah Berbasis Web (Studi Kasus SMK Al-Kahfi)”. Jurnal JINTEKS. Vol 2 : hal 7-14.

[4] Wahyudi Farid. 2020. “Rancag Bangun Aplikasi Pembayaran Iuran Komite Berbasis Web di SMK Taman Ilmu Kromengan”. Jurnal Teknologi Terapan. Vol 3(2):hal 214-220.

[5] “Peraturan Pemerintah Republik Indonesia Nomor 71 Tahun 2010 Tentang Standar Akuntansi Pemerintah”, http://www.djpk.depkeu.go.id , diakses 31 Mei 2018 pukul 10.19.

[6] Suradji M. 2018. “Pengembangan Teknologi Informasi dan Komunikasi di Bidang Kesiswaan, Kepegawaian dan Keuangan di SMA Muhammadiyah 1 Gresik”. Jurnal Studi Pendidikan Islam. Vol 1:hal 127-151.

[7] Purnomo Dwi. 2017. “Model Prototyping Pada Pengembangan Sistem Informasi”. Jurnal Informatika Merdeka Pasuruan. Vol 2 : Hal 54-61.

[8] Mulyani, Sri. 2016. Metode Analisis dan Perancangan Sistem. Bandung. Abdi Sistematika. ISBN : 978-979-19906-2-2.

[9] Evayani, Utamy U. 2016. “Perancangan Database Sistem Informasi Akuntasi Siklus Penjualan dengan Menggunakan Model Rea (Studi Kasus pada PT Yudi Putra, Medan”. Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA). Vol. 1(2): hal 16 - 29