Digital Financial Management for Mosque Fundraising: Empowering Indonesian Workers in Taiwan

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Abstract. This paper proposes the implementation of a digital financial management system for a group of Indonesian workers in Taiwan who perform fundraising to build a mosque. The system utilizes Google Form for data entry and Google Spreadsheet (dashboard) for processing and displaying the financial information. The results show the effectiveness of the tool in streamlining data entry and enhancing financial reporting and management. It is also supported by a pre-test and a post-test administration, resulting that there is a 20% improvement on the post-test upon utilizing the tools.

Keywords: financial management, fundraising, worker

1 Introduction

The rapid advancement of digital technology has revolutionized various aspects of our lives, including financial management. However, many small organizations, such as community groups and religious institutions, still struggle to adopt digital tools for their financial operations. This paper aims to address this issue by proposing the implementation of digital financial management for a group of Indonesian workers in Tainan, Taiwan, who have been performing a fundraising to build a mosque in the city centre since 2021.

The Indonesian workers in Taiwan have undertaken a commendable initiative to establish a mosque to cater to the spiritual needs of their community. To accomplish this, they have been collecting funds from Indonesian workers in Taiwan on a regular basis. Figure 1 depicts the fundraising team of Indonesian worker ready to collect donation from the starting point in front of temporary the musalla (prayer room). However, the existing financial reporting system, which involves manual entries in a physical book, presents several challenges. It lacks transparency, accountability, and efficiency, hindering the proper monitoring and management of funds. The primary objective of this paper is to introduce a digital financial management system utilizing the online reporting and financial dashboard features of Google Spreadsheets. By leveraging this technology, the Indonesian workers can transition from their current manual system to a more streamlined and accountable process.

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Figure. 1. The fundraising team is ready to go for the collection of weekly donations.

The proposed digital financial management system will enable the Indonesian workers to record and track their financial transactions in a digital format, eliminating the need for manual bookkeeping. Google Spreadsheets offers various functionalities, including data entry, calculation formulas, and graphical representation, which can be utilized to create a comprehensive financial dashboard. By implementing this digital system, several benefits can be realized. Firstly, the transparency of financial transactions will be significantly improved. Each contribution can be accurately recorded, ensuring a clear and transparent audit trail. This transparency will foster trust among the donors and the wider community, increasing their confidence in the fundraising process [1].

Secondly, the efficiency of financial reporting and analysis will be enhanced. The digital system allows for real-time data entry and automatic calculations, reducing the time and effort required for manual data processing. Additionally, the financial dashboard provides visual representations of financial data, facilitating easy interpretation, internal/external control, and analysis [2].

Furthermore, the digital financial management system offers better accessibility and collaboration. Authorized individuals can access the financial records remotely, allowing for seamless monitoring and coordination. The system can also support multi-user collaboration, enabling multiple volunteers to work simultaneously on financial tasks.

In conclusion, the transition from a manual financial reporting system to a digital financial management system holds immense potential for improving transparency, accountability, and efficiency in the fundraising efforts of the Indonesian workers in Taiwan. By leveraging the online reporting and financial dashboard features of Google Spreadsheets, the proposed digital system will provide an effective solution to their current challenges. The subsequent sections of this paper will delve deeper into the implementation details, benefits, and best practices for the successful adoption of digital financial management in the context of mosque fundraising.

To support the proposed approach, this paper draws upon insights from relevant academic research and existing work or experiences. The following references will provide valuable evidence and perspectives on digital financial management, transparency in fundraising, and the adoption of technology in community organizations.
A study by F. Najmudin and A. I. Bayinah about mosque financial management examines the competence of takmir (mosque administrators) in maintaining the quality of financial reports. Secondary data from published journal articles and academic papers were analyzed to explore the literature on this topic. The findings emphasize the crucial role of takmir in ensuring transparent and accountable financial reporting to stakeholders. To enhance the quality of mosque financial reports, recommendations include improving human resource competence, implementing effective financial management and internal control, conducting fundraising activities, and leveraging technology [3].

The community service carried out by K. R. Salman et al aims to design mosque books and accounts based on the Interpretation of Financial Accounting Standards (ISAK) 35. The focus is on developing an accounting information system for mosques that complies with relevant accounting standards for non-profit-oriented entities. The implementation involves discussion forums, training, and mentoring to compile a chart of accounts, prepare trial balances, and input daily transactions. The outcomes are the mosque accounting information system (SIMAS) software and mosque financial statements [4].

E. Kabu and S. Y. S. Engel developed an integrated financial information system using Google Spreadsheet for effective control of a company's working capital. Data collection involved observation, interviews, and mini experiments. The model proved highly effective in providing real-time financial information for management control, ensuring accuracy and efficiency. The study was implemented in The Petra Balfai Diaconate Agency, successfully controlling cash on hand, cash in bank, accounts receivable, and inventories—the key components of working capital [5].

The references cited above offer valuable insights and perspectives on digital financial management, transparency in fundraising, and the adoption of technology to what is proposed in chapter 3. They provide a solid foundation for implementing digital financial management in the context of digital report for mosque fundraising.

2 Methodology

The methodology outlines the process flow in Figure 2 of implementing a community service program to promote digital financial management among Indonesian workers in Taiwan. The program also involves the creation of a financial report tool using Google Spreadsheet, developed in collaboration between the UMY team and the Indonesian Student Association in Tainan (PPI Tainan).

The process began with a step involving extensive discussions with Indonesian workers to introduce the concept of digital financial management and proposed the use of a tool created in Google Spreadsheet. This step ensured that the tool met the specific needs and requirements of the Indonesian workers, considering their limited familiarity with technology. The next step explained the selection of Google Spreadsheet as the platform for the tool due to its user-friendly interface, which was suitable for the Indonesian workers' technological limitations. The tool was built using Google Forms for data entry, including information such as the name of the person in charge, fundraising date, donation amount in NT dollars, and any additional notes. The data filled into Google Forms was then processed and displayed on a dashboard in Google Spreadsheet, providing transparency and accountability.

Simultaneously, a workshop was conducted to train Indonesian workers, particularly the fundraising committee, on how to effectively use the tool. This step ensured that the workers understood how to enter data accurately and utilized the tool for financial management purposes. During this workshop, a pre-test and a post-test were given to the participants to measure the change or improvement of their knowledges before and after the tool was introduced.
The final step involved monitoring the tool's usage for a year or until the fundraising committee became proficient in independently managing and inputting the data. This monitoring was conducted jointly by the UMY team and PPT Tainan, ensuring the tool's effectiveness, and providing ongoing support to the workers.

Figure. 2. Process flow in the realization of the financial report tool

The tool’s flowchart outlines the process of utilizing a financial report tool built on Google Spreadsheet. It follows a sequential order:

1. Users input data through a Google Form, which is directly linked to the Google Spreadsheet.
2. The responses from the Google Form are collected and stored in the Google Spreadsheet. The collected data includes the name of the person in charge, cash inflow, optional cash outflow, date, and optional notes.
3. The cash inflow and outflow data are then categorized into two blocks: monthly and annual cash flow.
4. A dashboard is designed on Google Spreadsheet to serve as the user interface for the financial report. The dashboard includes key information, such as the last reporting date, the name of the last reporter, the balance of collected money, a plot diagram illustrating monthly cash inflow and outflow, and the annual balance also in plot diagram.

This flowchart, as shown in Figure 3, provides a clear overview of the steps involved in using the financial report tool on Google Spreadsheet. The process starts with data entry through a Google Form, which is subsequently collected and organized in the spreadsheet. The dashboard serves as a visual representation of the financial report, providing important information for monitoring the cash flow on a monthly and annual basis.
Overall, the flowchart illustrates a comprehensive process for implementing digital financial management in the community, emphasizing user-friendly tools, training, and continuous monitoring to ensure the successful adoption and utilization of the technology by Indonesian workers in Taiwan.

3 Results and Discussion

In the result chapter of this paper, the outcomes of developing a financial report tool utilizing Google Form and Google Spreadsheet are presented. The tool consists of a Google Form for data entry and a Google Spreadsheet called "Dashboard" that displays the processed data in a user-friendly interface.
Figure 4 showcases the Google Form used for data collection. The form includes five empty boxes for the user to fill in: (1) the name of the person in charge or reporter, (2) cash inflow, (3) optional cash outflow, (4) reporting date, and (5) optional notes. This form serves as an efficient means for users to input financial data accurately and conveniently.

Figure 5 illustrates the Google Spreadsheet Dashboard, where all the collected data from the Google Form is processed and displayed. The Dashboard contains several key components. (1) Firstly, it features a title and organization logo, providing a clear identification of the financial report tool. (2) Secondly, it includes a link for data entry, which redirects users to the Google Form for ease of inputting new data.

The Dashboard also presents essential information, such as the last reporting date (3) and the name of the last reporter (4), ensuring visibility and accountability in the reporting process. Moreover, it displays the current balance of funds (5), which is automatically calculated based on the cash inflow and outflow data provided in the Google Form. The balance is accompanied by a progress bar (6), visually indicating the progress towards the target amount to be achieved.

Additionally, the Dashboard offers monthly reports (7) for cash inflow and outflow, providing a comprehensive overview of the financial activities for each month. This enables users to track and analyze the flow of funds over time. Furthermore, the annual balance report (8) summarizes the financial status for the entire year, giving users a holistic view of the project's financial performance.

In conclusion, the developed financial report tool utilizing Google Form and Google Spreadsheet has proven to be effective in streamlining the data entry process and displaying the processed data in an organized manner. The tool's user-friendly interface, real-time calculations, and comprehensive reports provide users with valuable insights into the project's financial status. This outcome demonstrates the feasibility and benefits of leveraging digital tools for financial reporting and management purposes.

To assess whether the dashboard interface has user friendly display and easy to use from the Indonesian worker’s point of view, 10 questions of pre-test and post-test were prepared. The number of correct answers between pre-test and post-test were compared for each participant in both tests and determine the results difference. This analysis will help to assess the improvement in participants' performance after conducting the workshop training (Figure 2). Overall, all participants showed an average improvement of 20% in their performance from the pre-test to the post-test. It is important to note that this analysis only considers the number of correct answers and does not account for the specific questions, or the significance of the difference observed. The detail results for each participant are shown in Figure 6.
Figure 5. Dashboard of the financial report for mosque donation

Figure 6. Pre-test and post-test results
5 Conclusion

The implementation of the digital financial management system utilizing Google Form and Google Spreadsheet has successfully addressed the challenges faced by the Indonesian workers in Taiwan in their fundraising efforts for the mosque. The developed financial report tool provides a user-friendly interface, enabling accurate data entry and real-time calculations. The system offers enhanced transparency, efficiency, and accessibility, enabling better monitoring and management of the funds. The results of the pre-test and post-test indicate that the workshop training has improved the participants' performance in using the tool.

References


