

OPTIMIZING THE MANAGEMENT OF VILLAGE ACTIVITIES THROUGH INFORMATION SYSTEMS FOR TRANSPARENCY AND ACCOUNTABILITY IN PERTUMBUKAN VILLAGE, WAMPU DISTRICT

Rian Farta Wijaya^{1*}, Fahmi Kurniawan², Randi Rian Putrai³, Aldi Alvin⁴

^{1,3}Fakultas Sains Dan Teknologi, Teknologi Informasi, Universitas Pembangunan Panca Budi

²Fakultas Sains Dan Teknologi, Sistem Komputer, Universitas Pembangunan Panca Budi

⁴Mahasiswa Teknologi Informasi, Universitas Pembangunan Panca Budi

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Abstract: The optimization of village activity management through the implementation of information systems plays a crucial role in enhancing transparency and accountability in local governance. This study focuses on Pertumbukan Village, Wampu District, where traditional administrative processes often face challenges related to inefficiency and lack of public access to information. By adopting a structured information system, the village administration aims to improve the accuracy, efficiency, and accessibility of records pertaining to village activities, including financial reporting, project monitoring, and public services. The study evaluates how the integration of such systems can lead to better decision-making, reduce corruption risks, and increase community trust in governance. Furthermore, the findings highlight the importance of information systems in creating a transparent environment where stakeholders, including village residents, can actively participate in monitoring and evaluating ongoing projects. The research suggests that adopting modern technological tools not only optimizes administrative functions but also ensures that village leaders are held accountable, fostering sustainable development and good governance practices.

***Correspondence Address:**

rianfartawijaya@dosen.pancabudi.ac.id

INTRODUCTION

In the context of digital transformation, local governance structures are increasingly acknowledging the necessity to modernize administrative systems to enhance transparency, accountability, and efficiency. Villages, as the smallest administrative units in Indonesia, are crucial for delivering essential public services and managing grassroots resources. However, many rural areas, including Pertumbukan Village in Wampu District, still depend on traditional, manual processes for managing village activities, which can lead to inefficiencies, lack of transparency, and increased

risk of mismanagement. These challenges can undermine trust between village administrations and their communities, hampering sustainable development efforts Rangkuti (2023).

The manual systems prevalent in village governance often involve paper-based records, which are time-consuming and prone to human error. This inefficiency can result in delayed reporting, inaccurate financial statements, and a general lack of accountability in resource allocation and utilization. Furthermore, these outdated systems limit public participation in monitoring and evaluating village projects, which is essential for transparent governance (Ardiansyah et al., 2022).

Information systems present a viable solution to these issues by digitizing and automating key administrative functions. Implementing such systems allows villages to streamline processes like financial management, project tracking, and service delivery, ensuring that information is accurate, timely, and accessible to both officials and the public. These systems also facilitate standardized record-keeping, making it easier to monitor activities, prevent corruption, and enable oversight from government authorities and the local community. In Pertumbukan Village, adopting an information system can address critical governance challenges and enhance overall administrative efficiency and transparency (Bondarenko et al., 2020).

This study aims to examine the impact of implementing an information system on managing village activities in Pertumbukan Village, focusing on improvements in transparency and accountability. By analyzing current administrative practices and evaluating the outcomes of integrating a digital information system, this research seeks to provide insights into the benefits and challenges of adopting technology in rural governance. Additionally, the study will explore community involvement in leveraging these systems to foster a more participatory and transparent governance process. The findings are expected to contribute to broader discussions on digital governance in rural settings and offer practical recommendations for improving village management in Pertumbukan Village and similar communities (Santos, 2022).

RESEARCH METHODS

This study employs a mixed-methods approach to investigate the impact of information systems on optimizing village activity management, particularly focusing on transparency and accountability in Pertumbukan Village, Wampu District. The combination of both qualitative and quantitative methods allows for a comprehensive analysis of the effectiveness of information systems in enhancing village governance (Putra et al., 2022).

1. Research Design

The research follows an exploratory design to understand the current state of village management practices and the extent to which information systems can be integrated to improve transparency and accountability. The study is divided into three phases: (1) preliminary assessment of existing village administrative practices, (2) the design and implementation of an information system, and (3) post-implementation evaluation of the system's impact on village governance (Hafni Hafni, 2023; Tasril et al., 2023).

2. Data Collection Methods

a. Primary Data

Primary data is collected through surveys, interviews, and focus group discussions with key stakeholders, including village officials, residents, and external observers such as local government authorities. Structured surveys will assess perceptions of transparency, accountability, and satisfaction with village management before and after the implementation of the information system. Interviews and focus group discussions provide in-depth qualitative insights into the challenges and opportunities of adopting technology in village governance (Perwitasari & Hendrawan, 2020; Putri & Hartanto, 2022).

b. Secondary Data

Secondary data is gathered from official village records, financial statements, and project reports. This data is used to analyze the accuracy and efficiency of record-keeping before and after the adoption of the information system. Additionally, government reports and academic literature on digital governance in rural areas are reviewed to provide context and support the findings.

3. Information System Implementation

A custom information system is designed to meet the specific needs of Pertumbukan

Village, focusing on the automation of financial reporting, project monitoring, and public service management. The system is introduced in collaboration with village officials and a local IT provider, ensuring that the software is user-friendly and adaptable to the village's existing infrastructure. Training sessions are conducted to familiarize village staff with the system's functions (Hendrawan et al., 2020; Ranti Eka Putri et al., 2023).

4. Data Analysis

Quantitative data from surveys is analyzed using statistical methods to identify changes in transparency, accountability, and efficiency after system implementation. Descriptive statistics will be used to summarize the data, while inferential statistics (such as t-tests) will assess whether observed changes are statistically significant. Qualitative data from interviews and focus group discussions will be analyzed using thematic analysis, identifying recurring themes related to the benefits, challenges, and perceptions of the information system among different stakeholders.

5. Evaluation Metrics

The effectiveness of the information system will be evaluated based on several key performance indicators (KPIs), including:

- **Transparency:** The extent to which village records (e.g., financial reports, project progress) are accessible and understandable to the public.
- **Accountability:** How well village officials are held responsible for their actions and decisions, including the accuracy of reports and timeliness of public services.
- **Efficiency:** Improvements in administrative processes, such as time taken to generate reports, manage projects, and deliver services.
- **Public Participation:** Increased involvement of village residents in governance processes, measured by community feedback and participation rates in village meetings.

6. Limitations

One potential limitation of this study is the limited generalizability of the findings, as the research focuses on a single village. However, the insights gained may provide a model for other rural communities seeking to implement similar systems. Additionally, challenges related to technological literacy and infrastructure in rural areas could affect the system's implementation and usage.

7. Ethical Considerations

The study ensures that all participants provide informed consent and are aware of their rights to confidentiality and anonymity. Data collected is used strictly for research purposes, and sensitive information is handled with the utmost care to protect participants' privacy.

RESULTS AND DISCUSSION

The implementation of the information system in Pertumbukan Village significantly enhanced the management of village activities, improving transparency, accountability, administrative efficiency, and public participation. This section presents a detailed analysis of these outcomes, followed by a discussion on the challenges faced during implementation.

1. Transparency

The most immediate improvement observed after the implementation of the information system was in the transparency of village operations. Previously, village residents had limited access to crucial information, such as financial reports and project updates. The system, designed with a user-friendly interface, allowed both the public and local government authorities to easily access up-to-date records through an online platform. Table 1 below summarizes the changes in transparency based on survey data collected before and after system implementation.

Table 1. Transparency

Indicator	Before Implementation	After Implementation
Percentage of residents with access to village financial reports	25%	85%
Availability of real-time project updates	Not available	Available
Public awareness of budget allocations	30%	75%

The data highlights a sharp increase in public access to key information, with 85% of residents reporting they could easily access financial reports after the system was implemented. Real-time updates on infrastructure and community projects further contributed to transparency, providing villagers with a clearer picture of how funds were

being used and the progress of ongoing activities. This increase in transparency strengthened trust between the village administration and the community, as residents felt they were being kept well-informed.

2. Accountability

Accountability within the village administration also improved considerably as a result of the system. The automation of processes, especially in financial reporting, reduced the possibility of human error and limited opportunities for the mismanagement of funds. Prior to the implementation, financial reports were often delayed, incomplete, or subject to manipulation. The information system's automated data entry and reporting tools ensured that all transactions were properly documented and could be tracked easily. Table 2 summarizes the changes in accountability indicators based on data collected before and after the system's introduction.

Table 2. Accountability

Indicator	Before Implementation	After Implementation
Timely submission of financial reports	60%	90%
Instances of report discrepancies	20%	5%
Number of public complaints related to funds	15 per year	3 per year

There was a notable increase in the timely submission of financial reports, rising from 60% to 90% after system implementation. Discrepancies in reports dropped from 20% to just 5%, indicating a higher level of accuracy. Public complaints related to village fund management also decreased dramatically, reflecting the positive impact of improved accountability mechanisms. The system allowed for enhanced monitoring by both the village leadership and residents, creating an environment where officials were more accountable for their actions.

3. Administrative Efficiency

Efficiency improvements were another major outcome of the system's integration. Previously, administrative tasks such as financial reporting, project tracking, and public service management were done manually, leading to delays and errors. The introduction of the information system automated these tasks, significantly reducing the administrative workload and improving the speed of service delivery.

Table 3. Administrative Efficiency

Administrative Task	Before Implementation (Time)	After Implementation (Time)
Time to compile financial reports	2 weeks	3 days
Time to process project documentation	1 month	1 week
Time for public service delivery	5 days	1-2 days

As shown in Table 3, the time taken to compile and submit financial reports decreased from two weeks to just three days, while project documentation times were reduced by 75%. Public services, such as issuing village permits, which previously took up to five days, could now be processed in one or two days, greatly enhancing the village administration's efficiency. These time savings enabled village officials to focus more on governance and community engagement.

4. Public Participation

The information system also positively impacted public participation in village governance. With easier access to information, village residents became more involved in decision-making processes. Attendance at village meetings increased as residents, empowered by the availability of data, felt more confident to engage with village officials and raise concerns about local projects and budgeting.

Table 4. Public Participation

Indicator	Before Implementation	After Implementation
Public attendance at village meetings	40%	70%
Participation in budget consultations	20%	60%
Number of community-led project proposals	5 per year	12 per year

As shown in Table 4, public attendance at village meetings increased from 40% to 70%, and participation in budget consultations rose from 20% to 60%. Additionally, there was a noticeable rise in the number of community-led project proposals, indicating that residents were more actively engaged in village planning and development.

5. Challenges

Despite the clear benefits of the information system, several challenges were encountered during implementation. One major issue was the low level of technological literacy among some village officials and older residents, which hindered their ability to effectively use the system. Although training sessions were provided, ongoing technical support was required to ensure that the system was fully utilized.

Another challenge was the limited internet connectivity in certain parts of the village, which occasionally disrupted access to the system, especially in more remote areas. As a result, some data input and updates were delayed, which affected the overall efficiency of the system. To address these challenges, further investment in digital literacy programs and infrastructure improvements, such as upgrading internet services, is necessary.

Discussion

The results of this study align with broader research on the role of digital technologies in improving governance, particularly in rural settings. Information systems have been shown to enhance transparency and accountability by making data more accessible and reducing opportunities for corruption. In Pertumbukan Village, the system played a critical role in fostering trust between the village administration and its residents, as it provided a clear and accurate representation of village activities and financial transactions.

However, the challenges encountered underscore the importance of providing adequate training and technical support to ensure the long-term sustainability of digital governance systems. Furthermore, infrastructure development, particularly in rural internet connectivity, is essential for maximizing the benefits of these systems. Without reliable access to the internet, the effectiveness of the information system will be limited, particularly in remote areas where access to government services is already constrained.

In conclusion, the implementation of an information system in Pertumbukan Village significantly optimized village activity management by improving transparency, accountability, efficiency, and public participation. While challenges such as technological literacy and infrastructure gaps persist, the positive outcomes highlight the potential for expanding the use of digital governance tools in other rural communities.

CONCLUSION

The implementation of an information system in Pertumbukan Village, Wampu District, has proven to be an effective tool in optimizing the management of village activities, with significant improvements in transparency, accountability, administrative efficiency, and public participation. The system allowed for greater accessibility to critical village records, such as financial reports and project updates, which enhanced transparency and built trust between the village administration and the community. Accountability was strengthened through automated reporting processes, reducing human error and instances of mismanagement, while improving the timely submission of accurate reports. The system also led to substantial gains in administrative efficiency, cutting down the time required for reporting and project management, and enabling faster public service delivery. Furthermore, public participation in village governance increased, as residents, empowered by access to information, became more involved in decision-making processes.

Despite these positive outcomes, the study also identified challenges related to technological literacy and limited internet connectivity, particularly in rural areas. These issues highlight the need for continuous training and infrastructure improvements to ensure the system's long-term sustainability and full utilization. Addressing these challenges will be key to maximizing the system's potential in enhancing governance and development in rural communities.

Overall, this study demonstrates the value of adopting digital tools in rural governance, offering a model that can be replicated in other villages facing similar challenges. Future research could focus on evaluating the long-term impact of such systems on local development and governance, as well as exploring additional technological solutions to further improve village administration.

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