E-Government Program to Enhance Digital Administration in Borobudur Tourism Village

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Abstract. In the current era, digital transformation is essential for accelerating document processing and administrative services, enhancing community engagement in village administration processes, and strengthening competitiveness as a tourist village through e-government. Borobudur Tourist Village, a UNESCO World Heritage Site, still requires improvements in administrative efficiency due to suboptimal village administration. The village faces challenges in managing administrative services that demand automation. This community service initiative involved local government officials and business operators in the Borobudur Tourist Village area. The program employed a phased approach, including training sessions on using e-government programs. The web-based e-government platform was developed to enhance document processing, increase community participation, and bolster the competitiveness of the tourist village. The results demonstrated high enthusiasm among participants and significant positive impacts on simplifying administrative services. With the successful implementation of this program, Borobudur Tourist Village has not only improved services for residents and tourists but also established itself as a model for other tourist villages. Digital transformation is expected to contribute to more transparent, responsive, and sustainable management, reinforcing Borobudur Tourist Village's position as a competitive tourist destination.

Keywords: digital transformation, e-government, administrative efficiency, borobudur

INTRODUCTION

Digital transformation is a critical aspect that can be utilized to accelerate various types of public services (Wu et al., 2023). In this era of rapid technological advancements, digitalization has become a fundamental necessity across numerous sectors, including village governance (Ilona et al., 2022; Sofyani et al., 2022). Digital transformation encompasses not only the modernization of technology but also changes in the delivery of services, emphasizing efficiency, effectiveness, and transparency (Antono et al., 2023). One concrete implementation of digital transformation in governance is the adoption of e-government, which offers an alternative solution to enhance the quality of public services, including at the village level. E-government plays a significant role in delivering village services. Through this system, diverse information can be disseminated in an integrated and timely manner to both local communities and external stakeholders. E-government-based services enable village governments to provide real-time information via easily accessible digital platforms (Malodia et al., 2021). These platforms can cover a wide range of services, from administrative information and village-level coordination to online reporting and complaint submissions. For instance, e-government integration allows residents to apply for administrative documents digitally without needing to visit the village office physically. Moreover, e-government supports the digitalization of village administrative services.

Digital transformation not only simplifies document management but also streamlines traditionally time-consuming and labor-intensive procedures. Digital applications or platforms encourage the management of residents' data can be automated, reducing the likelihood of manual errors and improving data accuracy. Digitalization also aids villages in securely and efficiently maintaining archival records, minimizing reliance on physical documents prone to damage or loss (Mensah, 2020).

The role of e-government extends to various auxiliary services designed to facilitate

administrative processes and interactions between village governments and their communities. Digital transformation focused on e-government development also enhances the transparency and accountability of village services. With open digital systems, residents can directly monitor various government activities, such as work reports. This level of transparency not only increases public trust in village governance but also encourages active citizen participation in village development (Paul, 2023).

Despite the benefits offered by digital transformation, implementing e-government in villages faces several challenges. One major obstacle is the limitation of technological infrastructure, such as unequal internet access and insufficient supporting devices. Additionally, varying levels of digital literacy among the population present another challenge that requires solutions through training and education. Village governments need to collaborate with various stakeholders to address these challenges, ensuring that digital transformation is implemented optimally and inclusively (Ilona et al., 2022). Digital transformation through e-government adoption in villages represents a strategic approach to improving public service quality. Leveraging digital technology enable village governments can deliver information more effectively, accelerate administrative processes, and establish more transparent and participatory service systems. When supported by adequate infrastructure and digital literacy programs, these efforts can accelerate sustainable village development that aligns with community needs.

Currently, many tourist villages have not fully utilized e-government to streamline digital services for both residents and visitors. The adoption of e-government can be an effective solution to enhance service efficiency and quality in the digital era. Tourist villages, as destinations that rely on interactions with local communities and tourists, require integrated systems to support various administrative and operational activities. Tourist villages can provide faster and more accessible information through e-government systems, such as event schedules, key tourism updates, and administrative or licensing services (Hermawan, 2017). Additionally, digitalization via e-government allows tourists to access information directly through online platforms without the need for physical visits to village offices. This system not only simplifies processes for local communities but also offers convenience to tourists in planning their visits. However, many tourist villages face challenges in implementing e-government, including limited internet access, insufficient technological infrastructure, and low levels of digital literacy among residents. Collaborative efforts among government bodies, tourism village managers, and relevant stakeholders are essential to building the digital capacity of these villages. Maximizing the potential of e-government develop tourist villages can enhance competitiveness, strengthen services, and evolve into modern and inclusive destinations.

Borobudur Tourism Village is one of Indonesia's premier tourist destinations, renowned for its UNESCO-listed Borobudur Temple (Arintoko et al., 2020). This World Heritage Site captivates visitors with its unique architecture and profound historical significance. Borobudur Temple serves not only as a source of national pride but also as a major attraction of domestic and international tourists annually. Given its immense potential, Borobudur Tourism Village has opportunities to further develop as a modern and sustainable destination (Soesanta et al., 2023). One strategic effort in this regard is the adoption of e-government to accelerate services for both the community and tourists.

E-government plays a pivotal role in supporting the effective and efficient management of tourist villages. It facilitates the provision of integrated, transparent, and easily accessible services for both residents and visitors. In the context of Borobudur Tourism Village, e-government implementation is particularly relevant in addressing the increasingly complex administrative demands arising from growing tourism activities (Mensah et al., 2022). Additionally, e-government serves as a tool to enhance community involvement in decision-making and bolster the village's competitiveness as a leading tourist destination.

Despite initial efforts to implement e-government, its application in Borobudur Tourism Village remains suboptimal. Analysis reveals several areas requiring improvement to ensure the system functions effectively. One critical aspect is the processing of documents and administrative services. Currently, many administrative tasks, such as issuing certificates, business permits, and managing resident data, are conducted manually. These manual processes are time-consuming and prone to recording errors. Optimizing e-government enhance the processes can be transitioned to a digital system, enabling faster, safer, and more organized document management. Furthermore, e-government has the potential to increase community engagement in administrative

processes. A key challenge faced by Borobudur Tourism Village is the low level of public participation in administrative activities and decision-making. This issue largely stems from limited understanding and skills in using digital technology. Therefore, intensive training programs are needed to improve digital literacy among residents. Enhanced community involvement would lead to more transparent and accountable administrative processes while fostering a sense of ownership over village programs (Arintoko et al., 2020).

Another crucial aspect requiring reinforcement is the competitiveness of Borobudur Tourism Village as a tourist destination. In the context of global competition, Borobudur Tourism Village must offer superior and distinctive services compared to other destinations. Through e-government, the village can develop digital platforms that simplify access to information, tourism event schedules, and other services for visitors (Paul, 2023). Additionally, such a system enables more effective digital marketing strategies, reaching broader audiences. Increased competitiveness would attract more tourists and generate positive economic impacts for the local community. To achieve optimal e-government implementation, a comprehensive and collaborative strategy is essential. Adequate technological infrastructure, such as stable internet access and supportive digital devices, is still needed. Training and education for village officials and residents should be prioritized to ensure they understand and effectively utilize the system. The village must also develop an integrated e-government system that consolidates all administrative and operational processes into a single, user-friendly platform.

Community education should be conducted interactively and in accessible language to foster acceptance and support for the village's digital transformation. This approach not only enhances public understanding but also helps address resistance to change, which often poses challenges during e-government implementation. Optimizing e-government in Borobudur Tourism Village will yield significant benefits in both the short and long term. From an administrative perspective, the system will expedite service delivery, improve data accuracy, and reduce the workload of village officials. For the community, greater involvement in village management will cultivate a shared sense of responsibility. From a tourism perspective, e-government can help Borobudur Tourism Village offer an enhanced experience for visitors, thereby strengthening its position as a premier destination. By addressing existing challenges and maximizing the potential of e-government, Borobudur Tourism Village can serve as a successful example of integrating modern technology with local traditions. This initiative will not only reinforce Borobudur's status as an international tourist destination but also support the economic and social sustainability of the local community.

METHOD

This community service initiative employs a seven-step framework to strengthen the digital transformation of tourist villages. In implementing the administrative digital transformation program in Borobudur Tourism Village, several methods are utilized to achieve the intended objectives, including:

1) Needs Analysis and Initial Assessment

This method involves an in-depth analysis of the village's administrative needs and an initial assessment of existing technological infrastructure. Needs analysis provides a comprehensive understanding of current issues and facilitates the planning of appropriate solutions.

2) Consultation and Collaboration

This step includes consultations with stakeholders such as village staff, local communities, regional governments, and private entities to gather input and secure support for designing and implementing solutions. Strong collaboration enables the development of more comprehensive and sustainable solutions.

3) Prototype Development

A prototype or initial model of the planned e-Government system is developed. This prototype is aligned with identified needs by addressing potential issues and refining the design prior to full implementation.

4) Training and Capacity Building

Training sessions are provided to village staff and local communities on using digital technology and e-Government platforms. These sessions are essential for improving knowledge, skills, and engagement in operating and leveraging the new system.

5) Phased Implementation

The solutions are implemented in phases, starting with the most urgent or impactful administrative areas or processes. This approach focuses on measurable issues and reduces the risks associated with comprehensive implementation.

6) Monitoring and Evaluation

Regular monitoring and evaluation are conducted to assess the program's implementation, both in technical aspects and its impact on administrative processes and public services. These evaluations help identify challenges and facilitate corrective measures as needed.

7) Sustainable Capacity Development

Continuous capacity development is ensured through advanced training programs and technical support for village staff and the local community. This aims to sustain and enhance the ability to manage and optimize the e-Government system over time.

This community service activity is organized in collaboration with multiple parties. The service team from the Faculty of Economics and Business, Universitas Negeri Semarang, is led by Dian Fithra Permana, with team members Nina Oktarina and Angga Pandu Wijaya. The initiative is supported by students Liza Dwi Anggraeni and Syaefa Habsyah Nur Maulida. Additionally, the activity receives support from the administrative apparatus of Borobudur Tourism Village.

RESULT AND DISCUSSION

The community service activity conducted on September 12, 2024, aligned with the fourth phase outlined in the project stages, aimed to enhance the governance of Borobudur Tourism Village through the development and implementation of a web-based e-government program. This program was designed to meet the strategic needs of the village, addressing three primary aspects: document processing and administrative services, community engagement in administrative processes, and strengthening the village's competitiveness as a premier tourist destination. The involvement Borobudur village officials and business actors within the local community association, this initiative became a collaborative effort focusing on empowering the local community and optimizing digital technology. One of the program's key achievements was the development of a more efficient system for document processing and administrative services. Using a web-based platform, administrative services such as certificate issuance, business licensing, and population data management can now be conducted digitally (Warjiyono & Hellyana, 2018). This advancement enables village officials to expedite service delivery while minimizing errors common in manual systems. Additionally, the platform enhances accessibility, allowing residents to access information and submit documents anytime without physically visiting the village office. This innovation not only saves time and costs but also increases transparency in village administration.

The e-government program was also designed to enhance community involvement in the village's administrative processes (Chen, 2010). A standout feature of the web-based system is the provision of an interactive channel that allows residents to voice their aspirations, provide feedback, and participate in decision-making regarding village governance. This approach fosters a culture of active participation among residents, encouraging a sense of ownership and responsibility for village programs. Specialized training was provided during the community service activity to improve digital literacy, ensuring that residents could fully utilize the platform. Active in involving the community, the program is expected to strengthen social cohesion and improve the quality of decision-making at the village level (Zou et al., 2023). Additionally, the web-based e-government program supports strengthening Borobudur Tourism Village's competitiveness as a premier tourist destination. Developed features include comprehensive information on tourist attractions, cultural event schedules, and a directory of local businesses accessible to tourists. Through this platform, local entrepreneurs can promote their products and services more effectively, reaching broader markets (Carter et al., 2022). This system serves as a vital tool for enhancing the village's marketing efficiency while providing a better experience for visitors. Improving its competitiveness, Borobudur Tourism Village can attract more visitors and solidify its position as a leading tourist destination in Indonesia (Soesanta et al., 2023).

Figure 1. Community Service to Socialize the E-Government Program

In Figure 1, the program's sustainability was a major focus of this community service initiative. Therefore, the platform was designed to be user-friendly and accessible to various stakeholders,

including village officials, residents, and tourists. Continuous training sessions were provided for village officials to ensure they could independently manage the system. Technical assistance was also offered to help address potential challenges during implementation. This approach ensures the program benefits not only Borobudur Tourism Village but also holds the potential to be adopted by other tourist villages. The broader impact of this program is significant. Other tourism villages can use it as a model for developing their e-government systems tailored to their specific needs. Adoption technology-based approach, these villages can improve the quality of their services, enhance competitiveness, and support the economic and social sustainability of local communities (Pratiwi & Muslihudin, 2018). This program not only addresses administrative challenges but also serves as a strategic tool for driving digital transformation at the village level.

The community service initiative marks a significant step in strengthening the governance of Borobudur Tourism Village through a web-based e-government system as depicted in Figure 1. With collaborative support from various stakeholders, the program successfully created an efficient, inclusive, and sustainable system. This achievement not only directly benefits Borobudur Tourism Village but also inspires other villages to leverage digital technology for improved governance. With strong commitment and sustainable management, this program is expected to continue delivering substantial positive impacts on the development of tourism villages in Indonesia.

The use of e-government has demonstrated significant impacts in supporting the governance of Borobudur Tourism Village, particularly in improving administrative efficiency and enhancing competitiveness. During the community service activity, socialization and training were essential elements to ensure the successful implementation of the web-based program. Participants, including village officials and local business actors, were given an in-depth understanding of the benefits of e-government and technical training to optimize system operations. The socialization activities were conducted interactively, using simple yet informative delivery methods to ensure that all participants, including those less familiar with technology, could understand the basic concepts and the importance of digitalization in village governance. Training sessions covered the operation of key platform features, such as administrative document management, use of interactive communication channels, and utilization of the digital directory to promote local businesses.

Figure 2. Enthusiasm of Participant in the Training at Borobudur Village

Participants showed high enthusiasm throughout the activities as represented in Figure 2. Most provided positive feedback on the immediate benefits, such as easier access to administrative services and faster document submission processes. They also appreciated features supporting village tourism promotion, which were considered impactful in increasing tourist visits. E-government has proven not only to be effective but also to deliver tangible benefits for Borobudur Tourism Village. Through socialization and training, village officials and the community are now better prepared to manage the system and more confident in addressing digitalization challenges. The success of this initiative underscores the importance of community involvement in the digital transformation process and serves as a model for other tourism villages in Indonesia.

CONCLUSION

The community service initiative conducted in Borobudur Tourism Village demonstrated that the implementation of a web-based e-government system significantly improves the efficiency of village administrative management, community engagement, and competitiveness as a tourist destination. This program not only streamlines document processing and administrative services but also enhances interactions between the community and village officials through an integrated digital system. The enthusiasm of participants, including village officials and local business actors, during socialization and training sessions reflected a positive reception of e-government and its tangible benefits for the community. The competitiveness of Borobudur Tourism Village was further bolstered by platform

features that facilitate the promotion of tourist attractions and local products, effectively reaching a broader audience. Training sessions ensured the program's sustainability by equipping participants with both basic and advanced skills for system operation. The success of this implementation is not only pertinent to Borobudur Tourism Village but also serves as a strategic model for adoption by other tourism villages across Indonesia. Digital transformation through e-government provides an innovative solution to administrative challenges while supporting the social and economic sustainability of villages. With ongoing commitment and support, this program is expected to continue delivering substantial positive impacts.

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