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Implementation of the 'Pelaku ParaDewi' Website to Improve the Efficiency of Population Administrative Services in Bangun Village, Mojokerto Regency

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ABSTRACT

Objective: *This research looks into the rollout of the Pelaku ParaDewi website, a digital advancement launched by the Mojokerto Regency Government aimed at enhancing population administrative services at the village level.* ***Method:*** *A descriptive qualitative method was employed for data gathering through interviews, observations, and documentation in Bangun Village.* ***Result:*** *The results indicate that Pelaku ParaDewi speeds up the processing of essential population documents like Identity Cards, Family Cards, and birth or death certificates by decreasing the dependence on traditional procedures at the regency office. This system improves efficiency for village officials, lessens travel expenses for residents, and boosts service responsiveness. Analyzing the situation through the Technology Acceptance Model (TAM) shows that the adoption of the system is greatly impacted by its perceived usefulness and ease of use, while the e-government readiness perspective indicates adequate infrastructure, human resources, and institutional backing.* ***Novelty:*** *Although there are technical hurdles and a limited range of services, Pelaku ParaDewi shows considerable promise as a model that can be replicated for inclusive and sustainable digital public service innovation in rural Indonesia.*

INTRODUCTION

Population administrative services represent a fundamental component of village governance that emphasizes the needs of the community. Important documents such as Identity Cards, Family Cards, birth records, and other official papers are vital for upholding the civil rights of citizens, such as access to education, health services, and social support [1]. Thus, it is essential to offer administrative services that are swift, precise, and effective, in order to promote good governance in villages. Nevertheless, many villages continue to encounter significant challenges in providing high-quality administrative services [2]. Lengthy manual procedures, insufficient facilities and personnel, along with a lack of digital skills among local residents, are primary obstacles that impede the effective delivery of public services at the village level. Furthermore, reliance on the operating hours of village offices and traditional paper-based systems tends to create burdens for community members, especially those who have limited availability or reside far from the village center [3].

With the advancement of information technology, the digitalization of public services at the village level has started to gain momentum as a solution to those challenges [4]. The use of Information and Communication Technology (ICT) is not only a symbol of modernization but also a concrete strategy to realize more responsive, transparent, and participatory public services [5]. One form of such innovation is the development of village websites as digital service platforms accessible to the public anytime and from anywhere [6]. In the context of governance, technological development

began to take shape since the enactment of Presidential Instruction No. 3 of 2003. Previously, services were delivered using paper and physical documents, which have now gradually shifted toward paperless systems and digital files using internet technology, enabling services to be carried out online via websites, e-forms, and applications [7]. Furthermore, technological advancement has influenced government bureaucracy and governance in Indonesia, leading to the emergence of major ideas such as the concepts of smart cities and smart villages [8].

As part of efforts to accelerate and modernize population administration services, the Government of Mojokerto Regency officially launched a digital innovation named Pelaku ParaDewi, an acronym for Pelayanan Administrasi Kependudukan Khusus Petugas Desa/Kelurahan Melalui Website (Population Administrative Services for Village/Sub-District Officers via Website) in November 2023. This launch was a strategic step toward improving the accuracy of population data administration in the region. By utilizing information technology, Pelaku ParaDewi is expected to simplify public access to administrative services and accelerate service processes that were previously conducted manually [9]. This innovation also reflects the local government's commitment to delivering more efficient, transparent, and responsive public services. Bangun Village in Mojokerto Regency is one of the villages that has initiated a digital transformation effort through the implementation of a website-based administrative service platform developed by the Department of Population and Civil Registration (Dispendukcapil) of Mojokerto Regency, known as 'Pelaku ParaDewi.'

Through this article, the author deems it important to examine the implementation of the Pelaku ParaDewi website as a village-level innovation model based on information technology [10]. To analyze the effectiveness of implementing digital innovations like Pelaku ParaDewi, the Technology Acceptance Model (TAM) proposed by Davis serves as the primary theoretical framework. TAM explains that acceptance and use of information technology by individuals are strongly influenced by two key factors: perceived usefulness and perceived ease of use. In a village context, the success of implementing a website-based administrative service depends on how beneficial and user-friendly the technology is perceived to be by both the community and village apparatus [11]. Additionally, the concept of E-Government Readiness is also relevant to understand the village's preparedness in adopting digital technology. According to the United Nations E-Government Survey, e-government readiness includes technological infrastructure, human resource capacity, and community participation. Therefore, the implementation of the Pelaku ParaDewi website must be viewed not only as a digital platform provision but also in the broader context of village readiness, including digital literacy among citizens and technical competence of village officials.

Previous research also shows that the adoption of information technology in rural public services faces unique challenges. Susanto and Goodwin argue that the success of e-government implementation at the local level is highly influenced by local leadership support, users' understanding of technology, and the availability of training and mentoring. Meanwhile, a study by Maulana on the digitalization of village services in Sleman Regency indicates that the success of digital innovations heavily depends on active community involvement and the sustainability of programs after initial launch.

By referring to these theories and past findings, the analysis of the Pelaku ParaDewi website implementation in Bangun Village can offer a deeper understanding of the factors that support or hinder the success of information technology-based public service innovations in rural areas. This article aims to provide a real depiction of the potential and challenges of digitalizing public services at the village level. Moreover, it offers practical recommendations for other villages seeking to adopt similar systems while encouraging policies that strengthen village capacity in the digital era. It is expected that technology-based approaches like this will accelerate the achievement of inclusive and sustainable village development goals.

RESEARCH METHOD

This research utilizes a qualitative framework through a descriptive method, intending to give a detailed illustration of how the Pelaku ParaDewi website is applied and its influence on the effectiveness of population administrative services in Bangun Village, located in Mojokerto Regency [12]. This method was selected because it is effective for investigating the meanings, views, and actual activities taking place in the field, especially regarding public service innovations that rely on information technology at the village level. The study is specifically concentrated on Bangun Village, recognized as a test area for the execution of the Pelaku ParaDewi initiative initiated by the Mojokerto Regency Government. The participants in this research include village officials who play a direct role in managing the website, administrative service operators, local residents using the services, and the village head of Bangun [13]. Data were gathered via thorough interviews with respondents, firsthand observation of service activities, and the collection of documents and reports connected to the use of the Pelaku ParaDewi website. The process of data analysis followed the interactive model proposed by Miles and Huberman from 1994, incorporating steps like data reduction, displaying data, and drawing conclusions [14]. The credibility of the data was verified through triangulation of sources and methods, along with member checks involving key informants to confirm that the researcher's interpretations matched real-world situations. The findings from this analysis are anticipated to offer a thorough insight into both the achievements and difficulties encountered in the digital innovation of public services at the village level, as well as its significance in relation to technology adoption theory and local e-Government preparedness.

RESULTS AND DISCUSSION

The implementation of the Pelaku ParaDewi website in Bangun Village, Mojokerto Regency, represents a significant advancement in the digitalization of public services at the village level. This service is an innovation by the Mojokerto Regency Government aimed at streamlining the previously manual and poorly integrated population administration processes [15]. Based on an interview with Mr. Anang, the village operator, the system began to operate effectively in early 2024, following trial runs and technical assistance conducted the previous year. Services that once required residents to visit the civil registry office (Dukcapil) can now be completed directly from the village, with most documents printed at the village office and delivered to applicants' addresses.

The Pelaku ParaDewi system offers services such as applications and replacements for Identity Cards (KTP), Family Cards (KK), birth certificates, death certificates, and relocation letters. The application process involves the operator uploading original documents submitted by residents. Once verified, the application is processed online by the Dukcapil operator. Documents like KK and certificates can be printed directly at the village, while documents such as KTP and Child Identity Cards (KIA) are still printed at Dukcapil and sent via mail. This demonstrates that the system functions not only as a data input tool but also as an administrative bridge between the village government and the regency's civil registry office.

The system's effectiveness can be analyzed using the Technology Acceptance Model (TAM) by Davis, which highlights two primary components of technology adoption: perceived usefulness and perceived ease of use. In terms of perceived usefulness, the system has proven to enhance the work efficiency of village staff. Previously, citizens had to travel back and forth between the village and Dukcapil for document applications and retrievals. Now, service time is significantly reduced and transportation costs are minimized. Mr. Anang stated that for simple documents such as KK or death certificates, the process can be completed in less than 30 minutes, provided the system is running smoothly. This indicates a strong direct positive impact of the system on service processes.

From the perspective of perceived ease of use, the village operator stated that the system is relatively easy to operate after receiving technical training from Dukcapil. The available features can be used efficiently, although there are still some technical issues such as buffering or delays in email confirmations. These issues often occur when the system experiences high traffic, for example, when new KTP stock arrives and submission requests surge [16]. Nevertheless, the support system, formed through communication groups between village and Dukcapil operators, facilitates prompt problem-solving. This demonstrates that the success of the implementation relies not only on the technology itself but also on structural support and cross-government coordination [17].

In relation to the E-Government Readiness concept from the United Nations, Bangun Village can be categorized as having good digital preparedness in the context of public services. This is evidenced by the availability of network infrastructure, operational equipment, and continuous training for operators. The village also receives strong institutional support from the regency government in the form of regulations, technical assistance, and the provision of integrated systems. Moreover, public participation is relatively high, with many residents showing enthusiasm in using the service due to easier access and shorter waiting times [18].

However, several key issues remain to be addressed moving forward. First, the Pelaku ParaDewi system is still heavily dependent on Dukcapil's centralized server infrastructure, which causes delays when multiple villages access the system simultaneously. Second, not all types of services are yet accessible through the system for example, reporting a lost birth certificate still requires manual handling at Dukcapil or sub-district offices. Third, technical challenges related to system stability and email notifications need to be resolved to ensure consistent and standardized service

workflows. Fourth, there is a need to improve digital literacy among residents so that they can independently access certain services in the future ideally through a public-facing user interface, not just via the village operator [19].

Interestingly, the digitalization effort has not diminished the interaction between residents and the village office. On the contrary, according to the operator, visits to the village hall have actually increased. This shows that digital village services do not alienate people from local government officials but instead make the village a more active, accessible, and efficient service center. This aligns with the smart village concept, where technology is used to enhance, rather than replace, social interaction and local institutions.

Conceptually, the implementation of the Pelaku ParaDewi website also proves that digital innovation is not exclusive to cities or large institutions. Villages, despite their limitations, can become fertile ground for innovation when supported by political will, technological readiness, and multi-stakeholder collaboration. This system has shown that modern and efficient public services can be built from the ground up, based on local needs, while remaining inclusive. With continuous improvement and consistent adoption, Pelaku ParaDewi has strong potential to become a national model for the digitalization of village-level population administration services.

Implementation

Below is the user interface of the Pelaku ParaDewi website as implemented in Bangun Village:

1. Homepage View of the Pelaku ParaDewi Website

The homepage displays usage guidelines, National Identification Number (NIK), and the password used by village operators to log in.

Figure 1. View of the Pelaku ParaDewi website.

2. Operator Dashboard View

After logging in, the operator will be directed to the dashboard, which displays information such as village resident data and service application submissions, as shown in the image below.

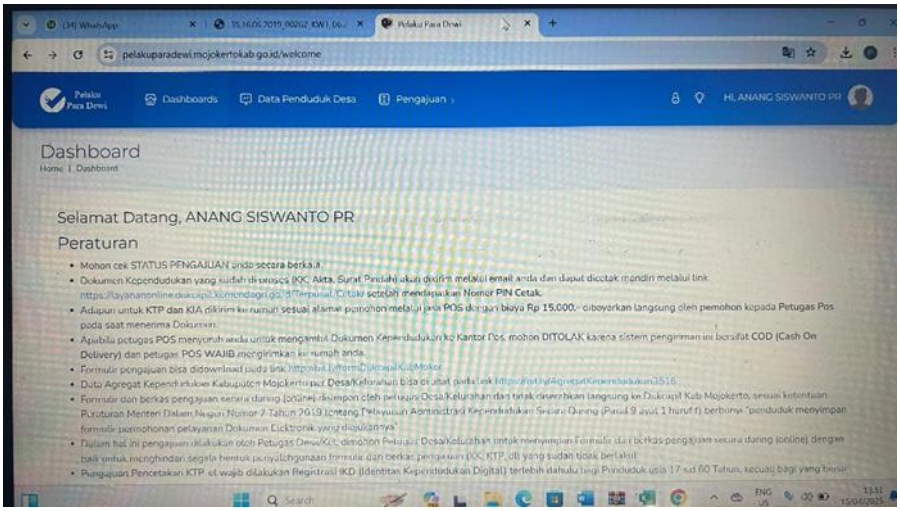

Figure 2. Operator Dashboard Display.

3. Status Request Page View

In this view, the operator can see the status or progress of the submitted letter requests.

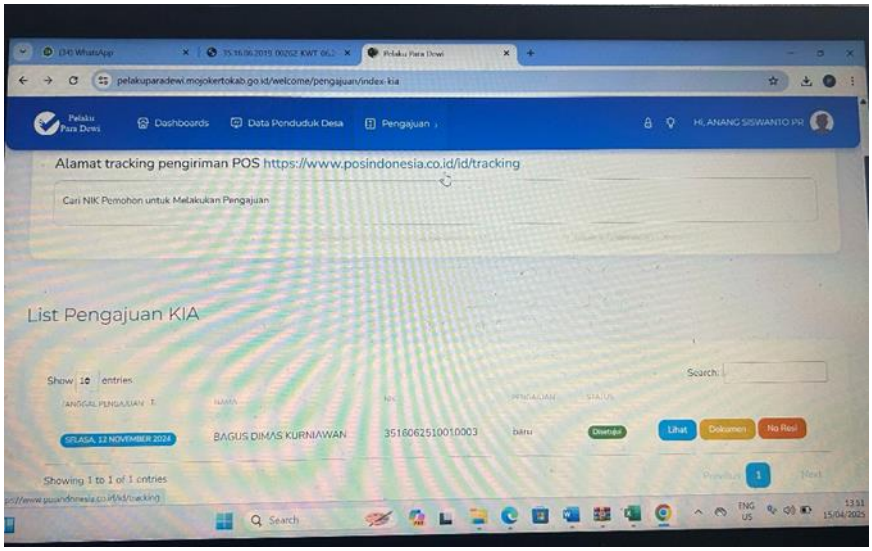

Figure 3. Display the Status of the Letter Request.

CONCLUSION

Fundamental Finding : The deployment of the Pelaku ParaDewi website in Bangun Village marks a successful advancement in digital technology that has greatly enhanced the effectiveness of administrative services related to the population at the village level. This system streamlines the application processes for various documents, including Identity Cards (KTP), Family Cards (KK), birth certificates, death certificates, and relocation letters, making them quicker, clearer, and easier for the public to access. Research results show that this system has positively influenced the efficiency of village officials and improved the availability of services for residents, especially by minimizing the necessity for individuals to physically visit the civil registry office (Dukcapil). **Implication :** An evaluation using the Technology Acceptance Model (TAM) demonstrates that Pelaku ParaDewi is embraced positively by both the operators and

community members, thanks to two primary factors: its practical advantages and its user-friendly nature. The perceived advantages include time efficiency, simpler processes, and quicker service delivery, which have mitigated technical challenges like system lag and notification delays. Additionally, from the standpoint of E-Government Readiness, the effective implementation of this system is supported by the village's readiness in terms of infrastructure, training provided for the operators, and strong backing from the Mojokerto Regency's Civil Registry Office (Dukcapil). **Limitation :** However, there are still areas that require enhancement, especially regarding technical features such as the stability of the system and the capacity of central servers, as well as boosting digital literacy among the residents to encourage greater engagement. **Future Research :** With ongoing improvements, Pelaku ParaDewi has significant potential to serve as a model for the digitization of public services in other villages, contributing to the realization of more inclusive, responsive, and modern administrative services.

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