

E-latter: A smart solution for enhancing administrative services in Tinggarjaya Village

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ABSTRACT

Tinggarjaya Village, located in Jatilawang District, Banyumas Regency, faces several administrative problems. One of them is that official letters are still made manually, which results in poorly organized data storage and limited archive space. This community service aims to overcome these problems through training and assistance related to digital administration, email utilization, and village website development. This program has been implemented and has provided significant benefits, especially in improving administrative efficiency and the capabilities of Tinggarjaya Village human resources.



KEYWORDS

E-Letter
Administrative services
Tinggarjaya village



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1. Introduction

Tinggarjaya Village is located in Jatilawang District, Banyumas Regency, and is located in the city center of the regency. This village consists of 10 RW and 47 RT. Tinggarjaya Village has a population of 10,529 people, with an education level divided into 10% primary and secondary education, 20% higher education, and 70% upper secondary education. Most of the population, around 80%, work in the private and government sectors (<http://tinggarjaya.desa.id>). With a fairly large population, Tinggarjaya Village experiences challenges in managing village administration. Fig. 1 is a graph of birth certificate ownership in 2023.

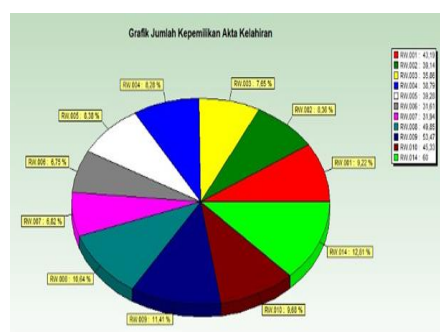


Fig. 1. Graph of the number of birth certificates owned by the Tinggarjaya Village community in 2023

Regarding administrative services, the 2023 graph shows that birth certificate ownership in Tinggarjaya Village is still low, which is caused by a lack of public awareness of the importance of this document and limited access to digital public services. Another problem faced by the village government is the management of official letters which is still done manually, resulting in inefficient archiving and limited storage space. In addition, the process of submitting correspondence by the public is often hampered by the unavailability of links or document templates for birth certificate services, marriage certificates, and

other administration. The third problem is related to the payment of regional taxes, land and building taxes which have not been digitally integrated, thus complicating the administrative process.

Regarding the problems that arise, an innovative solution is needed in the form of a digital administration system that can support the correspondence process and document management more effectively [1]. Based on the problems in Tinggarjaya Village and discussions with the village government and community leaders, the implementation of digital services is expected to be a solution to make it easier for the community to access administrative services and increase the efficiency of the village government's work. Therefore, the implementation of E-Letter is proposed as an effort to improve the quality of administrative services in Tinggarjaya Village through the use of information technology and increasing the competence of human resources in digital administration management.

The community service was carried out with the theme of utilizing e-letter to improve administrative services in Tinggarjaya Village, Jatilawang District, Banyumas Regency. The purpose of this community service is to realize digital archive services in Tinggarjaya Village to facilitate the process of storing and managing archives through the application of Electronic Archive (e-Archive), implementing the Electronic Archive (e-Archive) application which is useful for village communities to reduce the risk of losing archives and limited storage space, improving the community's ability to utilize digital technology for administration through the use of Electronic Letter (e-Letter) to accelerate and facilitate the process of correspondence services, encouraging easy access to services and improving the economy through BUMDes with training and utilization of online tax platforms to support public administration services, and building collaboration between the community and academics at Jenderal Soedirman University in order to improve the competence of superior, skilled, and competitive human resources.

The incorporation of E-Letter was deemed to be a smart strategy to improve the administrative services of the village. This is a new development on the use of a digital system based on information technology so as to ease the administrative tasks of the village. The E-Letter system uses organized procedures for data to be stored and retrieved quickly and effectively, instead of manually doing this which is tedious and prone to errors. It also enhances the provision of administrative services through the internet to villages regardless of the time and distance. Moreover, using E-Letter, village administration management can be operated in more transparent and accountable manner. This innovation also makes village leaders active because it advances the technologies that are used in their day today work.

2. Method

Based on the problems faced by partners, the solution offered is through the application of participatory training and mentoring methods. In this approach, partners are actively involved in all stages of activities, starting from problem identification, analysis of required actions, strategy planning, to program implementation. By using this method, every problem identified and planned action comes from the aspirations and input of partners in a "bottom-up" manner. This ensures that every step taken is more targeted and effective in solving problems optimally.

The service method is carried out in several stages aimed at improving the village's administrative system through digital technology. First, problem identification and needs analysis are conducted to understand the challenges faced by village officials and the community in administrative services. Next, system planning and design are carried out, where the service team develops the E-Letter system tailored to the village's needs, including selecting the appropriate technology. Afterward, training and empowerment are provided to village officials and residents to ensure they can operate the system effectively. The next step involves the implementation and testing of the system to ensure its functionality and identify any potential issues that may arise. Once the system is running, continuous support and monitoring are conducted to provide technical assistance and evaluate the system's effectiveness. Finally, an evaluation and report are prepared to assess the impact of E-Letter's implementation on improving administrative services and provide recommendations for further development.

3. Results and Discussion

3.1. Coordination of Program Implementation

Program implementation begins with coordination with partners to discuss the activities to be carried out, including procurement of necessary tools and materials and allocation of funds. Partners expressed

their gratitude and appreciation for the continuation of this program because it is expected to facilitate village administration management.

3.2. Village Administration Counseling

Before the program started, the management of the partner website and administration system was not well organized, so many files were mixed up and it was difficult to sort between documents that needed to be archived and those that needed to be destroyed. The program team introduced the use of Google Drive so that all administrative staff could store letters in digital form. In addition, socialization regarding the use of electronic mail was carried out so that the public could access administrative services more easily. This activity aims to introduce the importance of using digital archives and electronic mail in administration, so that the public can manage documents more efficiently.

3.3. Website Management

The next stage after counseling is to organize and manage the village website. The village already has a website provided by Diskominfo to display the village profile and provide information to the community. However, the website has not been utilized optimally. Therefore, it is necessary to add relevant content and templates in order to improve information services to the community [2].

3.4. Electronic Archive (e-Archive) and e-Letter Training

Many documents in physical form are difficult to identify and manage, making village administration less efficient. The program team developed a strategy for better administration management through archive digitization, with the aim that these documents can be stored and accessed in a more structured manner in digital form. Then, from these documents, a template is created to be made in the form of an e-letter. So that when the document is needed, it can be easily used.

The use of Electronic Letter (E-Letter) as a digital innovation in administrative services in Tinggarjaya Village is one of the efforts to increase the efficiency and effectiveness of public services. This initiative is in line with the global trend in the application of information technology in the government sector, known as e-Government [3] E-Letter allows the public to submit and obtain administrative documents online, which not only speeds up the administration process but also reduces direct contact and overlapping data that often occurs in manual archive management.

Based on a study from a journal published by Afrizal, et al [4], the application of digital technology in remote villages has been proven to be able to increase service responsiveness and reduce waiting times in processing correspondence by up to 50%. The implementation of E-Letter is also expected to increase accessibility for the community, especially for those with limited mobility or a long distance from the village office.

Furthermore, research by Nuning [5] shows that the implementation of administrative digitalization through e-Letter can minimize filing errors and facilitate data retrieval. The study highlights that the electronic mail system can simplify administrative workflows and create transparency in public services. On the other hand, Kurhayadi's study [6] also emphasized the importance of intensive training and mentoring for village officials to ensure that technology adaptation runs well and according to expectations.

The implementation of E-Letter in Tinggarjaya Village, in addition to facilitating the processing of letters, is also expected to overcome problems faced by the village such as limited archive space and irregular manual administration. Research by Anisa [7] supports this by stating that the use of digital archives integrated with e-Letter can reduce the need for physical storage space by up to 70%, as well as facilitate data storage and retrieval more efficiently.

In addition, the use of E-Letter also has the potential to support the implementation of government policies in improving Good Governance. A study by Darmanto [8] states that digital technology in government administration supports the creation of accountability, transparency, and public participation. With E-Letter, the public can access administrative services more quickly and accurately, and also monitor the ongoing service process, thereby reducing the potential for abuse of authority [9].

Therefore, the use of E-Letter in Tinggarjaya Village not only improves administrative services, but also strengthens the institutional capacity of the village in managing information and serving the community better [10]. With targeted assistance and training, it is hoped that village officials can utilize

this technology optimally, create villages that are more responsive to community needs, and realize more professional and accountable public services [11].

The implementation of the E-Letter system has significantly enhanced time efficiency in administrative processes by automating and streamlining communication. Traditionally, manual letters often caused delays and inefficiencies, but digital technology now facilitates faster delivery of correspondence. The transition to an electronic system has proven to improve overall operational efficiency across various administrative contexts. The E-Letter system reduces communication delays by automating the letter dispatch process, enabling immediate delivery and tracking of correspondence [12]. The use of digital platforms has been linked to improved accuracy in letter handling, reducing errors typically associated with manual processes [13]–[15].

Studies indicate that the adoption of the E-Letter application in public services leads to faster processing times and a reduction in bureaucratic bottlenecks. For instance, Farhansayah et al. [16] found that the introduction of the e-letter application in Surabaya's Civil Registration Office in 2022 significantly improved time efficiency by streamlining online dispositions and automating the archiving system, substantially reducing the time required to send and validate letters compared to manual methods. Similarly, Krasnykov et al. [17] suggested that electronic services like E-Letter enhance public administration efficiency by cutting down bureaucratic delays. Their study reveals that e-government contributes to approximately 57.1% of the variation in efficiency indicators, improving overall time management in administrative processes. Automation of the archiving system has streamlined workflows, enabling staff to focus on more critical tasks rather than handling manual letters [18]. These findings are echoed in studies by Sopamena [19], Fadillah and Marsofiyati [20], Manurung et al. [21], and Chhawware [22].

The introduction of the E-Letter service in Tinggarjaya Village has significantly enhanced the accessibility of administrative services, especially for residents located far from the village office. This digital approach not only streamlines communication but also promotes greater transparency and efficiency in public service delivery. The E-Letter service enables residents to submit requests and receive information without needing to travel to the village office, saving time and resources [23]. Digital platforms facilitate easier access to various administrative services, including letter delivery and complaint handling, which is particularly crucial for rural communities [23]. Increased accessibility through e-government initiatives has been correlated with higher community participation in local governance [24]. Easy online access to public information encourages residents to become more engaged in village affairs, strengthening the democratic process [24]. The adoption of digital systems significantly improves public service accessibility, enabling residents to engage with administrative functions remotely [25]. This transition not only simplifies processes but also empowers individuals by providing timely access to essential services [26].

The implementation of the E-Letter system has also led to a notable increase in resident satisfaction with administrative services, as demonstrated by various studies. The shift from manual processes to e-government services has improved user experience, efficiency, and overall satisfaction [27]. Research indicates that e-government systems contribute to higher satisfaction levels. For example, the use of e-governance in Punjab has been associated with ease of use, directly correlating with customer satisfaction [28]. The automation of administrative tasks reduces processing times, which enhances user satisfaction. Increased efficiency in service delivery is crucial for boosting resident satisfaction [29]. Trust and security are vital factors influencing resident satisfaction with e-government services [30]. Ensuring data privacy and secure transactions fosters trust in the system.

The E-Letter system has the potential to significantly improve village administration by streamlining processes and integrating with broader initiatives such as e-Government and smart village projects. This integration can enhance public service management, ensuring efficiency and transparency. E-Letter can facilitate the delivery of electronic services, reduce paperwork, and improve transparency in local government [31], [32]. By aligning with the smart village concept, E-Letter can support various administrative functions, promote community engagement, and ensure efficient resource allocation [33], [34]. Regular updates are crucial for addressing security vulnerabilities and improving functionality, ensuring the system remains relevant and effective [35]. Ongoing training for users is essential to maximize the system's potential, building trust and competence in using the technology [31], [35].

During the implementation of the Community Service Program (PPM) related to the application of IPTEKS in the Tinggarjaya Village government, Jatilawang District, Banyumas Regency, there were several obstacles that emerged from the beginning to the end of the activity. These obstacles and their solutions can be seen in [Table 1](#) below.

Table 1. Obstacles and Solutions During PPM Implementation

No	Obstacles	Solutions
1	Human resource capacity in the use of information technology in the administration sector is still low	Conduct intensive training and mentoring for the community
2	Choose information technology methods and programs that are easy for the community to implement	Create a priority scale to choose programs that are easiest for the community to use
3	Partners do not yet have a digital administration system	Provide mentoring and training to partners to use digital administration on available platforms

Community service activities have been carried out as a whole. This program has provided many benefits and positive impacts for various parties, especially for partners, namely Tinggarjaya Village in Jatilawang District, Banyumas Regency. The community service team has provided training and assistance to the community regarding digital administration and the use of electronic mail. In addition, the team has also developed a website managed by the village government and facilitated the use of Google Drive and email for digital administration management, as well as increasing human resource capacity. This activity aims to facilitate village officials in improving administrative and public services to the community.

4. Conclusion

Community service activities have been carried out as a whole. This program has provided many benefits and positive impacts for various parties, especially for partners, namely Tinggarjaya Village in Jatilawang District, Banyumas Regency. The community service team has provided training and assistance to the community regarding digital administration and the use of electronic mail. In addition, the team has also developed a website managed by the village government and facilitated the use of Google Drive and email for digital administration management, as well as increasing human resource capacity. This activity aims to facilitate village officials in improving administrative and public services to the community.

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Declarations

Author contribution. First Author: Responsible for planning and implementing community service activities, including collecting field data, analyzing community needs, and implementing the village administration digitalization program. The first author also plays a role in compiling the community service report and writing the overall article manuscript. Second Author: Plays a role in developing training content and mentoring for the use of digital technology, as well as assisting in the implementation process of the e-Letter and e-Archive programs. The second author also contributes to the article editing process and reference management. Third Author: Plays a role in managing the technical aspects of the program, including the development and maintenance of the village website and the digital system implemented.

The third author is also involved in evaluating the effectiveness of the program and helps compile the discussion section of the article.

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