JOURNAL LA BISECOMAN
VOL. 05, ISSUE 06 (1031-1045), 2024
DOI: 10.37899/journallabisecoman.v5i6.1916

Analysis of the Role of Information Technology Management in Improving Public Services in Sesumpu Village

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Article Info

Article history:
Received 17 November 2024
Received in revised form 5 December 2024
Accepted 28 December 2024

Keywords:
Information Technology Management
Public Services
Sesumpu Village
Supporting Factors
Implementation Constraints

Abstract

This study aims to analyze the role of information technology management in improving public services in Sesumpu Village. With a qualitative approach, data were collected through interviews, observations, and document analysis. The results of the study indicate that the application of information technology has accelerated the administrative process, increased communication efficiency, and strengthened coordination between village officials. Supporting factors include government support, enthusiasm of village officials, and community participation. However, obstacles such as limited human resources, inadequate infrastructure, and low digital literacy are still major challenges. The recommended strategies include developing online service applications, increasing internet network capacity, continuous staff training, and educating the community to improve the use of technology. These findings demonstrate the importance of a strategic and inclusive approach to information technology management in order to create more efficient and transparent public services.

Introduction

In today's era of globalization, information technology (IT) has become an important pillar in various aspects of life, including in the field of government and public services. Information technology refers to various hardware and software used to manage, store, process, and disseminate information efficiently. The presence of information technology offers various innovative solutions that can help organizations, including government agencies, to work faster, more accurately, and more transparently (Kassen, 2022; He et al., 2022).

The development of information technology in Indonesia has progressed rapidly, in line with increasing internet access and the adoption of digital devices. According to a report from the Indonesian Internet Service Providers Association (APJII) in 2024, more than 79.5% or 221,563,479 people from a total population of 278,696,200 Indonesians have been connected to the internet. This creates a great opportunity for the government to utilize information technology to improve and accelerate public services. Technologies such as e-government, digital service applications, and computer-based information management systems have begun to be adopted in many regions to facilitate public access to various public services (Fahm, 2023; Longo & Dirsehan, 2024; Amir & Liwaul, 2023).

The application of information technology in public services aims to simplify the bureaucracy which has often been considered slow and inefficient (Goshovska et al., 2021; Maulana et al., 2022). Through information technology, the government can automate many processes that previously took a long time, such as processing population documents, business permits, and paying taxes. In addition, information technology allows for greater transparency in public

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)

services, reduces the potential for errors, and narrows the space for corrupt practices (Adam & Fazekas, 2021; Mugellini et al., 2021).

However, although information technology has great potential to improve public services, its implementation in Indonesia still faces various challenges. One of them is the digital divide, where not all regions have adequate technological infrastructure (Chaoub et al., 2021; Afzal et al., 2023). Many regions, especially in remote areas and suburbs, still face problems such as limited internet access, minimal technological devices, and low digital literacy among the community. This condition results in slow implementation of information technology in several regions.

In addition to infrastructure, public acceptance of information technology is also a challenge. In several regions, many residents are still more comfortable using conventional methods to access public services, either because they are unfamiliar with technology or worried about changes to the system, they are already familiar with. Therefore, efforts to educate the public about the benefits of information technology and provide adequate training and assistance are important so that technology adoption can run smoothly (Chatterjee et al., 2021; Al-Adwan et al., 2023.

Overall, the application of information technology in public services has a strategic role in accelerating and improving the quality of services to the community. With proper implementation, information technology can help overcome various obstacles that have so far hampered public services, such as convoluted bureaucracy, lack of transparency, and limited access for the community.

Public services are a real form of government presence in fulfilling the basic rights of the community (Galego et al., 2022). This includes various services provided by the government to its citizens, such as population document management, business licensing, health, education, and public infrastructure. The quality of public services is an important indicator in assessing the effectiveness of government, because good services will increase public trust in the government, while poor services can cause dissatisfaction and even public distrust (He & Ma, 2021; Stroppe, 2023).

In the context of Indonesia, public services still face various significant challenges. Long bureaucracy, lack of transparency, complicated procedures, and long service times are often complaints from the public. Based on data from the Ministry of State Apparatus Empowerment and Bureaucratic Reform (KemenPAN-RB), around 65% of public complaints related to public services involve problems of delays and unclear information. In addition, public services in many regions, especially in areas far from the city center, are still limited by the lack of infrastructure, human resources, and availability of technology.

Improving the quality of public services is one of the priorities in bureaucratic reform in Indonesia. The government has made various efforts to improve public services, one of which is by implementing Public Service Standards, which are regulated in Law Number 25 of 2009 concerning Public Services. This standard aims to ensure that every citizen receives quality, fast, transparent services that are in accordance with their needs. However, the implementation of this standard has not been evenly distributed throughout Indonesia, especially in areas that still face limited resources.

The application of information technology in Sesumpu Village can include various innovations, such as a village management information system, a public complaint application, and the use of social media for communication. Through this system, the public can access information in real time and submit service requests more easily. However, although several

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initiatives have been initiated, there are still many challenges to be faced, including inadequate infrastructure and low digital literacy among the community.

On the other hand, challenges in implementing IT in Sesumpu Village also include resistance to change from within the government. Many employees may feel comfortable with conventional ways of working and are reluctant to adapt to new technologies. Therefore, it is important to develop a culture of innovation in the government environment so that IT can be accepted and utilized optimally.

The importance of this study lies in the in-depth analysis of how information technology management can play a role in improving public services in Sesumpu Village. This study is expected to provide a clear picture of the potential benefits of IT and the challenges faced in its implementation. Thus, the results of this study can be a recommendation for the government to formulate a more effective strategy in implementing IT.

Methods

This study applies a qualitative approach that aims to understand phenomena without requiring a quantification process. According to Sugiyono (2018), qualitative research methods are methods that are based on a certain philosophy and are used to research in a scientific (experimental) context, where researchers act as the main instrument, and data collection and analysis techniques focus more on meaning. Qualitative methodology aims to study and explain phenomena or research objects through social interaction, as well as through the views and behavior of individuals or groups. Qualitative researchers work with the assumption that theories are tested deductively, maintain the objectivity of the research, control the possibility of other explanations, and are able to generalize and replicate research results.

In qualitative research, researchers themselves or with the help of others act as the main instrument for data collection (Moleong, 2016). Based on this view, researchers have an important role in designing, collecting data, analyzing, and compiling research. Therefore, researchers play a key role in the research process. To support data collection in the field, researchers use notebooks and pens as tools for recording data.

In this study, the author chose Sesumpu Village as the research location. The selection of this location aims to examine the role of information technology management in improving public services. In this study, researchers conducted in-depth observations related to the role of information technology management in improving public services in Sesumpu Village by directly observing the use of information systems by village officials, interactions between the community and technology-based service systems, and the effectiveness of technology in accelerating administrative processes. Researchers also noted how information technology is applied in various aspects of public services, such as document management, integrated services, and communication between the village and residents. In addition, observations were made on the facilities and technological infrastructure used to support these services.

Result and Discussion

The role of information technology management in improving public services

Information technology has become one of the main pillars in the transformation of public services at various levels, including at the sub-district level. By utilizing technology, public services can be carried out more effectively, efficiently, and transparently, thus providing a positive impact on both the government and the community.

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Information technology-based systems enable administrative processes that used to take a long time to be faster, data management to be more structured, and public access to public services to be easier. In addition, technology also opens up opportunities to create services that are more responsive to community needs, reduce the risk of human error, and increase accountability in the provision of services. In the context of Sesumpu Sub-district, the application of information technology is a strategic step to improve the quality of public services, while also answering challenges in the increasingly complex digitalization era. Based on the results of observations and interviews conducted on December 20, 2024 with informant one, Mrs. Indah Roviqa, ST as the Secretary of the Village Head, she stated that:

> *"Here, information technology is used more for administrative services, such as processing letters, population data, and village program information. So, residents don't need to come many times, just come once to pick up documents if the data has been inputted."*

Furthermore, the researcher conducted an interview about the scope of service aspects with the second informant, Mrs. Rabaiyah, who expressed her opinion as follows:

> *"To be honest, it doesn't cover everything. Some services still need a more comprehensive system, for example for citizen complaints and reporting damage to public facilities. Currently, residents still submit complaints manually or via WhatsApp groups, and that makes it difficult to track or archive the data properly. In addition, the integration between the village system and related agencies is also not optimal, so sometimes the process is hampered in the inter-agency communication section."*

The next interview that the researcher met was the third informant, Mr. Adi Fitriansyah with the position of Head of Community Empowerment and Social Welfare who stated the same thing as the informant Mrs. Indah Roviqa, ST about information technology used in the public service process, including:

> *"Information technology here is quite helpful. For example, for correspondence such as submitting KTP, KK, or cover letters, all the data is inputted directly into the system. So, it's more organized, there is no overlapping data. If residents need documents, just check the status via WhatsApp or phone, no need to go back and forth to the sub-district."*

The next interview about the service aspect in Sesumpu Sub-district with the fourth informant:

> *"To be honest, not all of them. For example, like citizen complaints are still manual, they have to come to the office. Then for the activity schedule or announcements, some are still posted on the information board, not all of them are online."*

Based on the results of interviews with informants, it is apparent that the intensity of information technology use in Sesumpu Village is quite significant in supporting administrative services, although it has not fully covered all aspects of public services. The first and third informants emphasized the important role of information technology in accelerating and streamlining administrative processes, such as processing official letters and population data. This technology helps reduce residents' waiting time and prevents overlapping data. Residents only need to come once to pick up documents after the data has been inputted, and the document status can also be accessed through simple communication such as WhatsApp or telephone.

Ease of exchanging information

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Based on the results of the interview with the fifth informant,stating:

> *"Communication is now easier because there are WhatsApp groups and social media. Usually if there is important information, such as document processing schedules or announcements from the government, it is immediately distributed in the WA group. But not all residents are active there, so there are still some who miss information."*

Almost the same answer was given by the third informant, who said that:

> *"So far it has been quite smooth. Most often, the community contacts via WhatsApp if they have questions. If there is important information, we usually announce it via the RT WA group or the sub-district's social media, such as Facebook or Instagram. So two-way communication is quite helpful."*

Furthermore, the results of the interview by the first informant, stated that:

> *"Most frequently, WhatsApp and social media like Facebook. For administration, we use the internal village application that has been integrated with the office."*

The same answer was also given by the fourth informant,including:

> *"What we often use is WA and Facebook groups. For administrative data, it is more about the internal applications provided by the office."*

Based on the interview results, information technology has provided significant convenience in exchanging information between the community and Sesumpu Village. The use of communication platforms such as WhatsApp, Facebook, and Instagram allow the dissemination of important information, such as document processing schedules or announcements from the government, to be faster and more efficient. The fifth and third informants highlighted that WhatsApp groups and social media are the main means of two-way communication between the village and the community. This makes it easier for residents to ask questions, provide input, or receive the latest information directly.

Ease of access to work together

Based on the results of the interview with informant, who stated that:

> *"It makes it very easy. We use a group messaging application for coordination, so it's faster if there are sudden tasks. But sometimes the problem is if there are staff who don't understand technology."*

The next interview with informant, explained that:

> *"Information technology really helps us to coordinate between staff, especially in dividing tasks and reporting. With the staff WhatsApp group, all information can be conveyed quickly, including if there are changes to the schedule or additional sudden tasks. In addition, the internal application also allows staff to see updates on work that has been completed, so there is no overlapping of tasks. However, the challenge is when there are staff who are not used to using technology or there are internet problems, coordination can be slightly hampered."*

Based on interviews with the first and second informants, it can be concluded that information technology generally provides significant convenience in coordination between staff in Sesumpu Village. The use of group messaging applications, such as WhatsApp, allows for the rapid delivery of information, including for sudden tasks, changes to the schedule, or division of tasks. Additionally, having an internal application helps monitor work updates, thereby reducing the possibility of overlapping tasks.

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Strategy in improving the application of information technology in Sesumpu Village

The application of information technology in public services in Sesumpu Village has become the main focus in improving the quality and efficiency of services. Along with the development of technology, various efforts have been made to integrate technology systems that can make it easier for the public to access administrative services. However, the application of this information technology is not free from challenges and obstacles, which require serious attention from the village management. In this context, the right strategy needs to be designed to overcome various obstacles and ensure that the technology implemented truly provides benefits for residents and village staff. Several things that need to be considered in designing a strategy for implementing this information technology include selecting appropriate devices, increasing human resource capacity, and preparing a comprehensive plan so that the implementation of technology can run smoothly.

Based on the results of an interview, her opinion that:

> *"Yes, for example new computers and internet network devices. But it hasn't reached sophisticated tools like automatic machines for citizen services."*

The results of the next interview about investment in technological devices by the second informant, Mrs. Rabaiyah, who expressed her opinion, including:

> *"There has been investment, such as the procurement of new computers, multifunction printers, and internet networks. In addition, we have also started using applications specifically designed for village services, although they still need updating. However, devices such as document scanners and servers for larger data storage are still missing, so that is the priority going forward."*

Continued by the second informant, Mrs. Rabaiyah, who expressed her opinion regarding plans for developing information technology in the future, this second informant stated that:

> *"We plan to develop an online service application that can be accessed directly by residents, such as for submitting letters or complaints. In addition, we also want to improve staff training so that they understand technology better and can maximize existing devices. Another plan is to improve the internet infrastructure in the village to make it more stable and faster."*

Next, the interview with the fifth informant, explained his opinion:

> *"The plan is to create an online service system so that residents can take care of documents from home. In addition, he also said he wanted to upgrade the internet network to be more stable and able to support more sophisticated applications."*

The interview results show that Sesumpu Village has made significant investments in information technology to improve the quality of public services. The first and second informants noted the procurement of new devices, such as computers, multifunction printers, and internet networks, which were the initial steps in supporting service operations. However, both informants also revealed that the investment did not include more sophisticated devices, such as automatic service machines, document scanners, or large servers for data storage.

Procedures and professionalism of service

Based on the results of the interview, with the fourth informant, expressing his opinion that:

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"The procedure is actually simple. Residents come, their data is inputted into the system, then just wait for information when the document is complete. But sometimes the system is slow if the network is having problems."

The results of the next interview regarding training to improve the skills of officers related to information technology by the second informant, who expressed her opinion included:

"There is, but it is not routine. Usually, training is carried out when a new device or application is introduced. The training is short and focuses more on how to use the application, not on improving general technology skills. So, in the future we hope that there will be more in-depth and ongoing training."

The results of the interview showed that the application of information technology in Sesumpu Village has helped simplify public service procedures. Based on the explanation of the fourth informant, the service process is simple, where resident data is inputted into the system, and residents only need to wait for confirmation when the document has been processed. However, the problem of an unstable internet network sometimes slows down system performance, thus hampering smooth service.

Service facilities and infrastructure

The next interview about the completeness of information technology facilities available in the sub-district was explained by the fifth informant:

"The facilities are quite good, but not very complete. There are computers, but not all of them are the latest. Printers are also often used together, so when it's busy sometimes there's a queue. Wi-Fi is available, but if many people use it at once, the speed becomes slow."

The results of the interview were also provided by the second informant, who stated her opinion:

"The facilities are good enough for basic needs, such as computers, printers, and internet networks. But there are still shortcomings in several areas, for example there is no special room for managing digital data or backup devices to protect important data."

The results of the next interview about service facilities by the fourth informant, who expressed his opinion, including:

"*We need additional devices such as larger servers, and other supporting tools for data digitization. The internet network must also be more stable, because there are often disruptions."*

Based on the interview results, the information technology facilities and infrastructure in Sesumpu Village have met the basic needs of public services, but there are still some limitations that need to be considered. The fifth informant stated that facilities such as computers, printers, and Wi-Fi networks are available, but the quality and quantity are still limited. Some devices are not the latest, and frequent use of printers can cause queues, especially when the work volume is high. In addition, internet speed often decreases when many users access it simultaneously.

Supporting and inhibiting factors in the application of information technology

The application of information technology in public services is influenced by various supporting and inhibiting factors. Supporting factors include government policy support, such

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as digital transformation programs, the availability of adequate technological devices, and the enthusiasm and willingness of staff to learn new technologies. In addition, community participation that is starting to get used to using technology-based services is also an important driver of successful implementation.

Based on the interview results from the fifth informant, stated his opinion that:

> *"The transparency is quite good. Residents can find out the status of their application if they ask the officer directly or via WhatsApp. But if there is a more complete online system, transparency can definitely be even better."*

Furthermore, the interview results from the same informant explained about satisfaction with technology-based services, the fifth informant stated that:

> *"For those who are used to using technology, they are satisfied. But those who are not familiar with gadgets or the internet are sometimes confused. So, education is still needed so that all residents can feel the benefits."*

The same thing was also expressed by the fourth informant, Mr. Nanang Aribudiono, S.KOM that:

> *"The transparency is quite good. Residents can check the application status via WA or ask the officer directly. But not all processes can be accessed online, so there are still some that are manual."*

Likewise with the interview results about service satisfaction, who explained that:

> *"On average, they are satisfied, especially those who are used to using gadgets. But for those who are not very tech-savvy, sometimes they are confused and prefer to come directly to the office."*

The interview results show that Sesumpu Village has achieved a fairly good level of information transparency and service certainty through the support of information technology. The fifth and fourth informants noted that residents can find out the status of their application by contacting officers directly or via the WhatsApp platform. This makes it easier for residents to get certainty without having to come to the village office frequently. However, a fully online system is still not available, so there are processes that are still carried out manually. This is an obstacle to achieving more comprehensive transparency.

The implementation of information technology management in Sesumpu Village has made a significant contribution to improving the quality of public services. Information technology allows service management to be faster, more efficient, and more structured. In terms of administration, information technology helps streamline the document processing process, reduce citizen waiting time, and ensure data accuracy. This is in line with research by Agustina et al. (2024), which states that the integration of information technology can increase efficiency and transparency in public services, so that the community benefits directly.

However, the scope of technology implementation in Sesumpu Village is still limited. Several services, such as citizen complaints and reporting of damage to public facilities, are still carried out manually. This condition indicates the need to develop a more comprehensive system, as stated by Suprianto (2023), that digitalization must cover all dimensions of service to ensure the optimization of technology use. This deficiency also shows the importance of a more targeted technology management strategy so that all aspects of service can be digitized effectively.

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In addition to administrative efficiency, information technology also plays a major role in increasing the ease of exchanging information between the community and the village government. The use of WhatsApp and social media such as Facebook and Instagram are the main means of conveying important information to the public, such as service schedules and policy announcements. Mukhsin (2020) emphasized that the implementation of E-Government at the local level can maximize communication between the government and the community, especially in conveying information quickly and accurately. However, challenges remain. Not all people are active on digital platforms, so some are still left behind in information. This shows the need for an inclusive strategy to reach people who are not yet involved in digital communication. Research by Darmawan (2012) also noted that community competence in utilizing technology is an important factor in ensuring the success of information technology-based communication. Therefore, Sesumpu Village needs to conduct more intensive socialization about the importance of utilizing technology in everyday life.

The ease of exchanging information is also strengthened by the use of internal village applications that are integrated with related agencies. This application not only facilitates communication between agencies but also ensures smooth administrative processes. Research by Ekram et al. (2022) found that the use of structured internal applications can increase work efficiency and reduce the risk of human error. Thus, the implementation of internal applications in Sesumpu Village is one of the strategic steps in supporting modern public services.

In addition to supporting communication, information technology also facilitates coordination between village staff. The use of WhatsApp groups for task division and reporting helps convey information quickly, even for sudden tasks. Information on completed work can also be tracked through internal applications, thereby reducing the risk of overlapping tasks. This is consistent with the findings of Darmawan et al. (2023), which emphasizes that employee competence in utilizing technology is the key to success in increasing work efficiency.

However, the obstacles faced are not few. Technological literacy among village staff still varies, so not all employees can utilize technology optimally. Internet connection disruptions are also a challenge, especially when used for sudden coordination. This condition reflects the need for routine technology-based training for staff, as suggested by Ekram et al.'s research (2022), to improve staff skills and confidence in using information technology systems.

In addition to training, investment in technology infrastructure is an urgent need. Suprianto (2023) noted that the reliability dimension in technology-based public services is highly dependent on the quality of infrastructure, including a stable internet connection. In Sesumpu Village, this investment can be realized through the procurement of modern hardware and increasing the capacity of the internet network, thereby supporting the sustainability of technology-based services.

Research by Taufiqurokhman et al. (2023) shows that E-Government transformation requires holistic system integration to create responsive and accountable services. In the context of Sesumpu Village, system integration between the village and related agencies still needs to be improved so that the communication and coordination process runs more smoothly. This can also minimize obstacles that often occur due to lack of synchronization between agencies.

Information technology also opens up opportunities to create more inclusive services. By developing user-friendly applications, Sesumpu Village can reach people from various backgrounds, including those who have limited access to technology. Mukhsin (2020) emphasized that E-Government must be designed to reach all levels of society, so that no one is left behind in the digitalization era.

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The overall implementation of information technology in Sesumpu Village reflects a gradual transformation process. Despite many challenges, strategic steps such as training, infrastructure investment, and application development have become a good foundation for creating modern public services. Research by Agustina et al. (2024) emphasized that the digitalization of public services requires a sustainable approach to ensure that all parties get maximum benefits.

With all the advantages and challenges that exist, Sesumpu Village shows great potential to become a model for technology-based public services at the local level. This study provides an illustration that targeted information technology management can significantly change the way the government serves the public. Alignment between theory and implementation in the field is the key to the success of digital transformation in the public service sector.

The strategy to improve the application of information technology in Sesumpu Village is a crucial step in responding to the need for more modern, efficient, and transparent public services. Although various efforts have been made, the application of this technology still faces obstacles, such as limited devices, internet network stability, and lack of training for staff. To overcome this problem, a strategic approach is needed that includes sustainable investment, infrastructure development, increasing human resource capacity, and optimizing public service procedures.

In terms of technology investment, Sesumpu Village has started with the procurement of basic devices such as computers, multifunction printers, and internet networks. However, more sophisticated devices, such as automatic service machines, and large servers for digital data storage, are still not available. This condition indicates that technology investment must be directed at procuring tools that support the full digitalization of public services. This is in line with the research of Yohanes et al. (2022), which emphasizes the importance of developing adequate technological infrastructure to support the successful implementation of E-Government.

In addition to investing in hardware, the development of online-based applications is also an important focus. The plan to create an application that allows the public to submit documents or complaints online will increase service efficiency. This strategy is relevant to the study of Ahmad et al. (2022), which states that E-Government-based innovation is able to support the principle of good governance by facilitating public access to public services. However, the success of this application is highly dependent on the stability of the internet network, which is currently one of the obstacles in Sesumpu Village.

In terms of service procedures, the application of information technology has simplified the administrative process by reducing public waiting time. Citizen data can be input into the system, and citizens only need to wait for confirmation when the document is processed. However, the constraints of the internet network which are often unstable slow down the performance of the system, thus hampering the smooth running of services. This is in line with the findings of Harahap et al. (2024), which highlighted that limited infrastructure is a major obstacle in maximizing the efficiency of technology-based public services.

Increasing human resource capacity is also an important element in this strategy. The training conducted in Sesumpu Village is still sporadic and only focuses on the introduction of new devices or applications. To support the implementation of more optimal technology, more in-depth and continuous training is needed so that village staff can operate the system properly. Yohanes et al. (2022) emphasized that staff competency development is one of the internal factors that influences the success of information technology implementation.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)

Information technology facilities and infrastructure in Sesumpu Village also need improvement. Although basic devices such as computers and printers are available, the limited number and quality result in long work queues, especially when work volume increases. In addition, the absence of a special room for digital data management and backup devices is a challenge in maintaining data security and sustainability. Julianti's (2024) research highlights that the development of physical facilities, including data management rooms, is very important to support safe and efficient technology-based public services.

To overcome these various obstacles, Sesumpu Village needs to implement an integrated strategic approach, as proposed by Yudhistyra et al. (2023). This approach includes strategic planning of information systems, strengthening infrastructure, ongoing training for staff, and developing inclusive applications. With these steps, the implementation of information technology in Sesumpu Village can be more focused and provide significant benefits to the community.

Overall, the management strategy in improving the implementation of information technology in Sesumpu Village must be based on a holistic approach that includes all important elements—from hardware, software, human resources, to infrastructure. This approach will not only improve the efficiency and quality of public services but also support transparency, accountability, and inclusiveness of services, as expected from the implementation of E-Government. With the right strategy, Sesumpu Village can become a model for effective implementation of information technology at the local level.

Sesumpu Village has shown a commitment to improving public services through the implementation of information technology. However, the success of this effort requires priority on the procurement of additional devices, development of technology-based applications, infrastructure improvements, and increasing human resource capacity. With an integrated strategic approach, Sesumpu Village can become a model for the implementation of information technology at the local level that supports efficiency, transparency, and accessibility of public services.

This strategy, if implemented well, will not only improve the quality of public services but also support the achievement of better governance, as expected in the implementation of E-Government in Indonesia. The implementation of information technology in Sesumpu Village is influenced by various interrelated supporting and inhibiting factors. These factors play an important role in determining the success of implementing information technology to improve public services. Based on the interview results, supporting factors include government policy support, availability of technological devices, enthusiasm of village staff, and community participation. On the other hand, inhibiting factors include limited human resources, inadequate infrastructure, and low technological literacy among certain communities.

Government policy support is one of the main drivers of the implementation of information technology in Sesumpu Village. Programs such as Smart City provide clear direction in the use of technology for public services. This is relevant to the research of Yohanes et al. (2022), which shows that government policies and budget allocations are internal factors that influence the success of the implementation of E-Government. Support from the city government, such as the provision of technological devices and applications, is also recognized by informants as an important element in supporting village operations.

The enthusiasm of village staff to learn new technologies is also an important capital in this transformation process. Informants stated that despite limited technical capabilities, village staff showed a strong willingness to adapt. This is consistent with the research of Putri et al.

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)

(2024), which highlights that internal organizational commitment can help overcome challenges in implementing information technology.

In addition, community participation that is starting to get used to using technology-based services makes a positive contribution. The positive response of residents to digital-based services reflects a good acceptance of this transformation. As stated in the research of Pratama et al. (2020), the willingness of the community to adapt to technology is one of the supporting factors for the success of implementing information technology-based systems.

However, the implementation of information technology in Sesumpu Village also faces various obstacles. One of the main obstacles is the limited human resources who do not understand technology. Informants stated that some village staff still need intensive training to operate technological devices properly. Yohanes et al. (2022) also noted that developing human resource competencies is a key factor in ensuring the success of implementing information technology.

Inadequate infrastructure, such as often unstable internet networks, is also a significant obstacle. Dependence on weak internet networks slows down system performance and hinders smooth service delivery. This is similar to the findings of Putri et al. (2024), who noted that limited technological infrastructure is one of the main challenges in implementing digital-based public services.

Low technological literacy among certain communities, especially groups that are not familiar with digital devices, is also a challenge in ensuring the accessibility of technology-based services. Pratama et al. (2020) recommend a socialization and training program for the community to improve digital literacy, so that all levels of society can make maximum use of information technology.

To overcome these various obstacles, a strategic approach is needed that includes routine training for staff, infrastructure improvements, and education for the community. Informants suggested more intensive training for staff so that they can operate technological devices with confidence. Putri et al. (2024) also recommend strengthening training as a solution to improve human resource competency.

Improving internet network infrastructure is an important priority to ensure the stability and smooth operation of technology-based systems. In addition, educational programs for the community must be designed inclusively so that they can reach groups that are less familiar with technology. This step is in accordance with the recommendations of Pratama et al. (2020), which emphasize the importance of socialization and training for the community to overcome the digital divide. The success of the implementation of information technology in Sesumpu Village is highly dependent on the synergy between supporting factors and strategies to overcome obstacles.

Government policy support, staff enthusiasm, and community participation are the main pillars in strengthening the implementation of information technology. On the other hand, challenges such as limited human resources, weak infrastructure, and low technological literacy must be overcome through training, infrastructure improvements, and educational programs. With a holistic approach, the implementation of information technology in Sesumpu Village can run more optimally, supporting the efficiency and inclusiveness of technology-based public services.

Conclusion

ISSN 2721-0987 (Print), ISSN 2721-124X (Online)

Information technology management in Sesumpu Village has significantly enhanced public services by streamlining administrative processes and improving communication through digital applications. Services such as document management have become more efficient, but some services, like citizen complaints, still rely on manual systems. To fully digitalize services, further development of the system is necessary. Key strategies for improving IT implementation include investing in advanced devices, developing online applications, upgrading internet networks, and providing regular staff training. While there is support from the government and enthusiasm from staff, challenges such as limited technological understanding, unstable internet, and insufficient facilities persist. Addressing these issues through staff training, better infrastructure, and increasing community technological literacy will ensure smoother implementation and greater benefits for the community.

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