

(Research/Review) Article

Analysis of the Application of Information Technology to Improve the Quality of Public Services

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Abstract: This study aims to analyze the implementation of information technology in improving the quality of public services. The research method used is library research by collecting and analyzing various scientific sources, such as journals, books, research articles, and government documents related to information technology and public services. The results show that the implementation of information technology through online service systems, official websites, and administrative information systems is able to improve the effectiveness, efficiency, transparency, and accessibility of public services. Information technology also helps accelerate administrative processes, reduce data management errors, increase employee productivity, and strengthen communication between the government and the community. In addition, the implementation of information technology supports the realization of e-government and good governance through increased accountability and information transparency. However, the implementation of information technology still faces several challenges, such as limited human resources, inadequate technological infrastructure, unstable internet connections, and the low ability of some communities to use digital services. Therefore, it is necessary to improve employee competencies, develop technological infrastructure, and conduct public socialization to optimize the implementation of information technology in public services. Overall, information technology has proven to be a strategic solution in creating modern, effective, efficient, transparent, and community-oriented public services.

Keywords: *Information Technology, Public Services, E-Government, Service Quality, Good Governance.*

1. Introduction

In the era of contemporary globalization, scientific and technological advances have significantly changed many aspects of human life, including public services and government. Information technology is one of the advances that has a great influence (Saputra et al., 2023). Information technology is a vital necessity for businesses, both public and commercial, to support their operations. Information technology is used to increase the effectiveness, efficiency, accuracy, and speed of information distribution to the general public, in addition to serving as a tool for data processing (Yondra, 2025). In the context of contemporary government, information technology plays an important role in developing service systems that are faster, more transparent, and easier to use by the general public (Saputra et al., 2023).

According to Parenreng et al., (2025), information technology is a collection of instruments that assist people in handling information and performing tasks related to information processing, an alternative point of view, stating that information technology includes communication technologies used for information transmission in addition to computer technology. On the other hand, Williams and Sawyer define information technology as a combination of communication and computer technology used to generate, process, store, and disseminate information in various formats (Kurniawan et al., 2026). According to these experts, information technology is a system that uses hardware, software, communication networks, and human resources to provide fast, accurate, and appropriate

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information to support various organizational and personal activities (Lubis & Nasution, 2023).

The rapid advancement of information technology in Indonesia has gone hand in hand with the increasing use of digital devices and the internet by many community groups. As part of its national development initiatives, the Indonesian government also continues to encourage digital transformation (Harto et al., 2023). The use of information technology has many advantages in various areas of life, including government, health, education, economy, and communication. Information technology can increase public information disclosure, speed up service procedures, simplify data management, and improve the quality of administration in the government sector (Yondra, 2025). People can now get services online without having to visit a physical service office thanks to information technology. The community will certainly benefit from this convenience, time savings, and cost savings (Lubis & Nasution, 2023).

In addition, the use of information technology in Indonesia is essential for the country's digital-based growth. Electronic-Based Government Systems, digital population administration services, electronic tax payments, and application-based healthcare services are just a few of the electronic-based initiatives that the government has created (Harto et al., 2023). By building a more modern and integrated work structure, the use of information technology can help increase the country's competitiveness in the digital era. Information technology allows for faster decision-making based on accurate and up-to-date facts. As a result, information technology plays an important role in developing efficient and successful governance (Saputra et al., 2023).

The idea of good governance is directly related to the use of information technology in government. Transparency, accountability, effectiveness, efficiency, public engagement, and the rule of law are key components of the idea of good governance (Andayani et al., 2024). The United Nations Development Program defines good governance as the exercise of administrative, political, and economic power in the management of various state activities at all levels. The goal of good governance is to have a clean and competent administration that can offer the best services to the people, as it can reduce complex bureaucratic procedures and increase transparency, information technology is an important instrument for implementing good governance (Hiplunudin, 2022).

Public accountability is increasingly supported by the use of information technology in the government system. All administrative and service procedures can be accurately recorded using digital technology, making it easier to monitor and assess (Hiplunudin, 2022). In addition, the public has easier access to public information, which increases public trust in the government. Information transparency supported by information technology can reduce the possibility of corrupt practices and abuse of power in government bureaucracies (Oktaviane & Helmi, 2023). As a result, the use of information technology is a planned step that will help change bureaucracy and build a government that is transparent and responsive to the demands of the people (Mauni, 2025).

Speed, accuracy, accessibility, transparency, and satisfaction are the characteristics of high-quality public services. However, in reality, there are still many challenges in providing public services in Indonesia (Harto et al., 2023). Complicated service processes, slow bureaucracy, non-transparent information, unprofessional authorities, and inadequate infrastructure and facilities are common problems. The inadequate quality of public services in a number of government agencies is also influenced by the continuation of illegal levies and non-compliance with service standards (Hi'mah, 2021).

The use of information technology is an important way to address these issues and improve the standard of public services. Information technology can speed up administrative procedures, reduce the need for manual paper, increase worker productivity, and make services more accessible to the general public. Online services are made possible by information technology, which eliminates the need for customers to physically visit service offices. In addition, by enabling direct monitoring of service processes by the public through electronic technology, digital-based service systems can increase transparency (Turban et al., 2021). The use of information technology is an important way to address these issues and improve the standard of public services. Information technology can speed up administrative procedures, reduce the need for manual paper, increase worker productivity, and make services more accessible to the general public. Online services are made possible by information technology, which eliminates the need for customers to physically visit service offices. In addition, by enabling direct monitoring of service processes by the public through

electronic technology, digital-based service systems can increase transparency (Parenreng et al., 2025).

There are several ways to look at the importance of using information technology to improve the standard of public services. First, because service processes can be automated and integrated, information technology can improve the effectiveness and efficiency of services (Saputra et al., 2023). Second, because all service data is stored digitally and easily monitored, information technology encourages accountability and openness. Third, because people can use the internet to access services at any time and from any location, information technology improves the accessibility of services (Mercan et al., 2021). Fourth, by making services faster, simpler, and more responsive, the use of information technology can increase public satisfaction. Therefore, the use of information technology is essential to provide contemporary and high-quality public services (Golabchi et al., 2024).

According to another study by Budhiartie & Nuriyatman, 2025, the government's dedication to creating sustainable digital systems, infrastructure readiness, and human resources all have an impact on how well information technology is implemented in public services. Meanwhile, Raharjo, 2022 research shows that bureaucratic reform through information technology can increase public trust in the government by increasing accountability and transparency of services.

Based on the description above, it is clear that information technology is very important to improve public service standards and help Indonesia achieve good governance. To meet the community's needs for fast, transparent, and effective services, the use of information technology is very important. Therefore, it is important to conduct the following research, to ascertain the extent to which the application of information technology can increase the effectiveness of public services and to identify various factors that facilitate or hinder its implementation in government agencies.

2. Literature Review

Significant changes in governance, especially in the provision of public services, have occurred due to advances in information technology. Government organizations can offer faster, more transparent, more effective, and more efficient services to the public thanks to the use of information technology (Turban et al., 2021). Information technology is used in public administration not only as an operational tool but also as a tactic to transform bureaucracy into a contemporary government focused on society. As a result, the use of information technology is essential to improve the standard of public services in the digital era (Mercan et al., 2021).

According to Subaryanto et al., (2025), information technology is a collection of technologies used to handle data, such as obtaining, processing, organizing, storing, and changing data in various ways to provide high-quality information. This view shows how important information technology is in producing timely and reliable information, which supports the improvement of public services. Information systems can improve the accuracy of data services provided to the public, speed up administrative procedures, and reduce human error in government services.

The extent to which government services meet the needs and expectations of the general public is measured by the quality of public services themselves. Fandy Tjiptono defines service quality as the expected level of perfection and the ability to set that level of excellence to meet the client's needs (Hi'mah, 2021). The public acts as consumers of services in the public sector, so the government must offer services that are transparent, responsive, and easily accessible. One of the efforts to achieve this level of service quality is the use of information technology through online service applications, electronic queuing systems, service digitization, and other technological breakthroughs (Widanti, 2022).

The idea of electronic government, or e-government, is closely related to the use of information technology in public services. According to Oktaviane & Helmi, (2023), e-government is the use of information technology by the government to offer services and information to the public, companies, and other stakeholders more effectively and efficiently. E-government can speed up communication between the government and the public, improve access to services, and increase bureaucratic transparency. Online population management services, electronic tax payments, application-based public complaints, and digital licensing systems are some examples of their use (Hiplunudin, 2022).

However, there are a number of obstacles that must be overcome when integrating information technology into public services. Data security, inadequate human resource capabilities, societal access gap to technology, and lack of technical infrastructure are some of the common challenges. Mauni (2025) asserts that bureaucratic structure, communication, resources, and disposition all play a role in the successful implementation of policies. To ensure the best possible use of digital services, governments must provide adequate infrastructure, formal training, and public socialization while implementing information technology (Inakefe et al., 2024). Therefore, the use of information technology is very important to improve public service standards. The public can benefit from more effective, efficient, transparent, and accessible services thanks to information technology (Raharjo, 2022). Creating a technology-based service system remains an important step in achieving good governance and high-quality public services, despite a number of obstacles in its implementation (Andayani et al., 2024).

3. Materials and Method

The research method used in this study is library research, which is a research approach that is carried out by collecting, studying, and analyzing various library sources that are relevant to the research topic (Connaway & Radford, 2021). Scientific publications, national and international journals, official government reports, regulations and regulations, and policy papers related to public services, good governance, and bureaucratic reform are among the data sources used. Using keywords related to the research title, scientific databases and other journal portals are searched to collect data (Connaway & Radford, 2021). To gain a thorough understanding, the collected data is further examined using qualitative descriptive analysis techniques, which involve the analysis, comparison, and synthesis of several ideas, theories, and findings of previous studies. The research methodology used is a literature review (Mishra & Alok, 2022). A wide range of literature sources relevant to the research topic, including books, scientific journals, research articles, proceedings, government regulations, and other scholarly sources relating to information technology use and quality of public services, are collected, examined, and analyzed as part of a literature review. Academic databases are used for data collection both offline and online (Mishra & Alok, 2022).

4. Results and Discussion

4.1 Research Results

The effectiveness and efficiency of public services are greatly influenced by the use of digital technology, according to research on the application of information technology to improve the quality of public services (Widianto, 2023). Information technology-based solutions have been shown to speed up administrative procedures and improve the quality of services offered to the public, according to observations, interviews, and documentation in a number of public sector organizations. Most services are still performed manually before optimal use of information technology, which often leads to long wait times, service delays, and errors in data management and logging (Di Sutarni et al., 2024).

According to the findings of the study, public service organizations are starting to support public service procedures using various information technologies, including official websites, online service applications, administrative information systems, and digital communication media (Latupeirissa et al., 2024). People can now more easily obtain service information, submit administrative requests, and track service completion processes without having to physically visit service offices thanks to the adoption of this digital technology. This shows how information technology can improve the adaptability of public services and simplify communication between the general public and government organizations (Subaryanto et al., 2025).

According to this study, the quality of communication between public service organizations and the general public is positively influenced by the use of information technology (Krötzel, 2021). The public can access information about service procedures, administrative requirements, service schedules, and important announcements more quickly and openly through official websites and social media. The availability of this easy information reduces administrative submission errors by helping the public understand service operations (Oktaviane & Helmi, 2023). According to most of the respondents in interviews with public service consumers, information technology-based services are more effective than traditional

services. Since the administrative procedures are faster and do not require long queues, the service is easier for them (Hiplunudin, 2022). In addition, they argue that digital services increase trust in public sector organizations by offering certainty regarding the timeline for service completion (Nurjannah et al., 2025).

In addition, the use of information technology increases accountability and openness in government services. The public can directly see the delivery of services thanks to the digital service system. The public can understand the service standards offered by the relevant authorities with clear information about the process, cost and turnaround time. This increases public trust in the government and reduces convoluted bureaucracy (Lubis & Nasution, 2023). Nonetheless, the study's findings suggest that there are still a number of challenges associated with the use of information technology in public services. The limited ability of human resources to run a digital system is one of the main challenges (Hamdat et al., 2024). Certain service procedures do not run optimally because some personnel lack the necessary technological capabilities. In addition, some workers still have difficulty adjusting to the switch from manual to digital service methods (Di Sutarni et al., 2024).

The limited information technology infrastructure that can be accessed by public service organizations is another obstacle. Digital service processes are often hampered in certain organizations due to unstable internet connectivity (Budhiartie & Nuriyatman, 2025). In addition, service system disruptions are also caused by the absence of supporting hardware, such as computers and servers. This situation shows that the readiness of supporting facilities and infrastructure has an impact on the effectiveness of information technology installations in addition to the systems used (Andayani et al., 2024). Additionally, according to the report, not everyone can fully utilize digital-based services. Some people still have difficulty using internet service applications because they do not understand information technology, especially the elderly. For those who are not yet familiar with digital technology, some organizations continue to offer in-person services (Budhiartie & Nuriyatman, 2025).

Overall, the findings of this study show that the use of information technology greatly improves the standard of public services. People can benefit from faster, more effective, transparent, and more accessible services thanks to information technology. However, to get the best public services, competent human resource assistance, adequate technological infrastructure, and continuous public socialization are needed.

4.5 Discussion

Overall, the findings of this study show that the use of information technology greatly improves the standard of public services. People can benefit from faster, more effective, transparent, and more accessible services thanks to information technology (Connaway & Radford, 2021). However, to get the best public services, competent human resource assistance, adequate technological infrastructure, and continuous public socialization are needed (Subaryanto et al., 2025).

The idea of e-government, which highlights the use of digital technology to improve the effectiveness of government administration, is in line with the use of information technology in public services (Al-Besher & Kumar, 2022). The government can respond to public needs more quickly, transparently, and effectively by using digital-based service platforms. By increasing the transparency and accessibility of communication procedures, information technology also contributes to improving relations between society and government (Prayitno, 2023).

According to research findings, the use of information technology can increase staff productivity in carrying out service tasks. Employees can handle public data more accurately and systematically by using digital devices (Mercan et al., 2021). Electronic databases facilitate data storage and retrieval, which speeds up service delivery. In addition, the use of information technology contributes to a decrease in administrative errors, which is common in manual methods (Ashiq et al., 2022).

The findings of the study show that since information technology was introduced, public services have become more transparent. The public can obtain clear information about the service method, administrative requirements, prices, and estimated completion date through the official website and online service application. The public is assured by this transparency, which also helps prevent abuse of power in public services (Judijanto, 2023).

The increase in public satisfaction with the services of government institutions is another indication of improving the quality of public services. Digital-based services are seen by the public as more useful and time-saving (Al-Besher & Kumar, 2022). In addition, people can

get services whenever they want without having to adjust to working hours thanks to easy access. This illustrates how information technology can be used to develop more adaptive and community-focused services (Widanti, 2022).

However, there are still a number of challenges that need to be overcome in the implementation of information technology in public services. The lack of human resources needed to run digital technology is a significant obstacle. Regular training and competency improvement are needed because not all personnel are proficient in using information systems. Digital service systems cannot function optimally without a skilled workforce (Sarifudin & Damanik, 2024).

The application of information technology in public services is hampered by limited infrastructure and lack of human resources. Lack of server support, inadequate computer technology, and unreliable internet connections all affect how well digital services work (Prayitno, 2023). System interruptions can sometimes lead to delays in service delivery, which can result in complaints from the general public. To provide the best possible digital services, the government must improve the quality of its technological infrastructure (Milakovich, 2021).

The study also found a gap in people's ability to use digital services. Some people still have difficulty using online service applications, especially the elderly and those who are less tech-savvy. This situation shows that in order for the use of information technology to serve society at all levels, digital transformation in public services must be balanced with education and public support (Al-Besher & Kumar, 2022).

Overall, the study's findings show that the use of information technology has improved the standards of public services. Information technology has proven to be able to produce faster, more transparent, more effective, and more efficient services, despite a number of challenges that still exist. It is estimated that the use of information technology will continue to improve the standard of public services in the future with the help of adequate infrastructure and human resources.

4. Conclusion

Based on the results of research and discussion, it can be concluded that the application of information technology plays an important role in improving the quality of public services. The use of digital systems, such as online service applications, official websites, and administrative information systems, is able to increase the effectiveness, efficiency, transparency, and ease of access to services for the public. Information technology also helps speed up administrative processes, reduce data recording errors, increase employee productivity, and strengthen communication between the government and the community. In addition, the application of information technology supports the realization of the concept of e-government and good governance because it is able to increase accountability, information disclosure, and public satisfaction with public services. People can get services faster, more practically, and more transparently without having to come directly to the service office. However, the implementation of information technology in public services still faces several obstacles, such as limited human resources, lack of technological infrastructure, unstable internet connections, and low ability of some people to use digital services. Therefore, it is necessary to improve employee competence, develop technological infrastructure, and socialize and educate the public so that the application of information technology can run optimally and evenly. Overall, information technology has proven to be a strategic solution in creating modern, effective, efficient, and community-oriented public services.

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