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Review Article

Public Service Transformation Through E-Government in the Klampid New Generation Application at the Department of Population and Civil Registration of Surabaya City

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Abstract: The transformation of public services through information technology has become one of the government's strategies to improve service quality for the community. The implementation of e-government enables public services to be delivered more effectively, efficiently, transparently, and with easier access. This study aims to analyze the transformation of public services through the implementation of e-government in the KLAMPID New Generation application at the Department of Population and Civil Registration of Surabaya City. The study employs a qualitative approach with a Case Study paradigm. Data were collected through interviews, observations, and documentation involving government officials and the public as service users. The research analysis uses the e-government development stage model proposed by Karen V. Layne and Jungwoo Lee, which includes the stages of presence, interaction, transaction, and transformation. The results indicate that the implementation of the KLAMPID New Generation application has supported the transformation of population administration services in Surabaya City. At the presence stage, the application provides digital information on population administration services. At the interaction stage, the system enables communication between the public and service providers through features such as notifications and service status monitoring. At the transaction stage, the public can submit service requests online by uploading required documents via the application system. Meanwhile, at the transformation stage, the KLAMPID New Generation application has integrated various population administration services into a single digital platform.

Keywords: Digital Platform Integration; E-Government; KLAMPID New Generation; Population Administration Services; Public Service Transformation.

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.1. Introduction

The development of information and communication technology over the past few decades has brought significant changes to various sectors of society, including government administration systems. Digital transformation has encouraged governments to innovate in administrative governance and public service delivery to make them more effective, efficient, transparent, and responsive to public needs. In the context of modern public administration, the use of information technology in government processes is known as electronic government (E-Government).

E-Government refers to the use of information and communication technology by the government to improve the quality of public services, strengthen the relationship between the government and society, and enhance efficiency and transparency in administrative processes (Heeks, 2006). The implementation of E-Government is not only focused on

service digitalization but also on transforming bureaucratic systems toward more open, participatory, and accountable governance (United Nations, 2022). The concept of E-Government has evolved alongside the paradigm shift in public administration, from Old Public Administration to New Public Management, and further to New Public Service, which places the community at the center of service delivery. In this paradigm, the government no longer functions solely as a regulator but also as a public service provider that must deliver quality, fast, and easily accessible services to the community (Denhardt & Denhardt, 2015).

In many countries, E-Government implementation has become a key strategy for improving public service quality and bureaucratic performance. The digitalization of public services can reduce lengthy bureaucratic procedures, increase service efficiency, and minimize maladministration practices such as illegal fees and corruption in service delivery (Bannister & Connolly, 2012). In Indonesia, the development of E-Government officially began with Presidential Instruction Number 3 of 2003 on the National Policy and Strategy for E-Government Development. This policy provides the foundation for central and regional governments to develop IT-based public service systems. Additionally, the government has strengthened digital transformation policies through regulations such as Law Number 25 of 2009 on Public Services and the Electronic-Based Government System, aimed at improving the quality of digitally-based governance.

Digital transformation in public services has become increasingly important as society demands higher-quality government services. Today, people expect services to be fast, easy, transparent, and accessible at any time without complicated bureaucratic procedures. Therefore, governments are required to leverage digital technology to improve the efficiency and effectiveness of public service delivery (Cordella & Tempini, 2015). Digital transformation has become a major agenda in local governments striving to enhance the effectiveness, accessibility, and reliability of public service delivery, particularly in population administration services, which form the legal basis of citizenship (Rahmatullah et al., 2025).

One critical sector of public service is population administration, which is the system of recording population data, including official identity documents such as Identity Cards (KTP), Family Cards (KK), birth certificates, death certificates, and other population-related documents. These documents have strategic functions as they serve as the basis for citizens to access various other public services, including education, healthcare, banking, and government social assistance programs (World Bank, 2019).

However, population administration services in many regions still face challenges, such as slow service processes, lengthy bureaucracy, and limited public access. These issues often make it difficult for citizens to obtain essential population documents necessary for daily life (Prasojo & Holidin, 2018). Digitalizing population administration services is one solution for addressing these challenges. By leveraging digital technology, population administration processes can be conducted faster, more efficiently, and transparently. Moreover, digitalization broadens public access to population services without the need to visit service offices in person (Mergel, Edelmann, & Haug, 2019). Public service innovation based on information technology is a key strategy for improving bureaucratic performance and strengthening public trust in the government (Dwiyanto, 2017).

Surabaya City Government is one of the local governments known for actively innovating in IT-based public services. Surabaya is often cited as a best-practice example in public service innovation in Indonesia. Various digital innovations have been developed by the Surabaya City Government to improve service quality for the community. One notable innovation is the Klampid New Generation (KNG) application, developed by the Department of Population and Civil Registration of Surabaya. This application is an upgraded version of the previous population administration system, E-Klampid, developed as part of the digital transformation of population administration services in Surabaya.

The Klampid New Generation application is designed to facilitate citizens in managing various population administration documents online. Through this application, residents can access services such as Family Card creation, electronic Identity Cards, birth and death certificates, population migration services, and other population administrative services without visiting the service office in person. In addition to providing digital services, the application includes innovative features to enhance service quality, such as an information service chatbot, online service process tracking, and integration with administrative systems at the sub-district and village levels. The development of Klampid New Generation represents a form of E-Government implementation in population administration in Surabaya. Through this application, the government aims to transform previously manual and bureaucratic services into digital services that are more efficient and responsive to public needs.

Previous research shows that E-Government implementation in public services can improve bureaucratic efficiency and service quality. Digital public services can reduce service time, increase transparency, and facilitate public access to services (Gil-Garcia, Dawes, & Pardo, 2018). However, E-Government implementation also faces challenges such as limited technology infrastructure, human resource readiness, and low levels of digital literacy among the public. Additionally, public acceptance of technology is a critical factor influencing the success of digital public services (Venkatesh et al., 2012).

In the context of population administration services in Surabaya, the implementation of the Klampid New Generation application still faces several challenges. Some citizens experience difficulties using digital services, particularly those with limited access to technology. Technical issues, such as system disruptions or internet connectivity limitations, may also affect the effectiveness of the application in service delivery. Therefore, a more in-depth study is needed to examine how public service transformation through E-Government implementation in the Klampid New Generation application can improve the quality of population administration services in Surabaya. This research is important to assess how effectively the application transforms public service systems and to identify factors influencing the success of E-Government implementation in population administration.

Based on this background, this study aims to analyze the transformation of public services through E-Government implementation in the Klampid New Generation application at the Department of Population and Civil Registration of Surabaya City.

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2. Literature Review

Concept of Public Service Transformation

According to Taufik (2020), the term transformation originates from the words "transform" and "transformation." Transform refers to changes in composition, structure, or character, while transformation refers to the act or process of changing. From this explanation, it can be understood that transformation involves activities aimed at altering something in terms of its composition, structure, or character. According to Natika (2024), public service transformation in the digital era is defined as: "A fundamental change in public service delivery, shifting from manual to electronic processes by utilizing information and communication technology (ICT) to improve the quality, efficiency, and effectiveness of public services." The digital era is characterized by the rapid development of information and communication technology (ICT).

In this context, the transformation of public services refers to the shift from traditional government services to electronic government, commonly known as e-government, through the use of digital technology. According to Anthony & Robin (2020), digital transformation is the process of organizational change through the utilization of digital or computer technology. In the public sector, it is important to shorten service time, ensure transparency, and provide proper treatment to citizens. Therefore, public service transformation through digital technology is considered capable of achieving these goals.

According to Brynjolfsson in Anthony & Robin (2020), digitalization has transformed many service sectors. Digitalization can be understood through two key aspects:

a. Network effect

   The network effect means that the more people use the service, the more useful the digitalization process becomes.

b. Scale effect

   The scale effect refers to the relatively low cost for users of digital services.

Through public service transformation, citizens can receive services simultaneously, at the same time, and from anywhere without needing to visit an office. Furthermore, digitalization allows service users to submit data online, thereby minimizing costs. According to Vartiainen in Anthony & Robin (2020), in the future, service users will no longer want to waste time waiting for bureaucratic processes that could be completed quickly and accessed from anywhere by anyone. In this context, automation and data-driven services are essential. This is supported by Anthony and Robin (2020), who state that public policy must evolve in line with technological developments. Therefore, public service transformation through the utilization of e-government has become increasingly important in today's digital era.

E-Government

. In general, E-Government is defined as an internet-based information management and public service system. These services are provided by the government to citizens. By leveraging the internet, a wide range of new service modes from the government to the public can emerge, allowing citizens to take an active role. It is expected that citizens can independently register for permits, monitor the progress of applications, and carry out other public services directly. All of these activities, with the aid of internet technology, can be performed anytime and anywhere (Hardiyansyah, 2003).

Belanger and Carter (2012) define E-Government as the use of information technology to enable and improve the efficiency of government services provided to citizens, employees, businesses, and institutions. The UNDP (United Nations Development Programme) defines E-Government as: "the application of Information and Communication Technology (ICT) by government agencies. E-Government is the use of information and communications technology (ICT) to promote more efficient and cost-effective government, facilitate more convenient government services, allow greater public access to information, and make government more accountable to citizens" (Indrajit, 2004).

E-Government refers to the use of information technology by government agencies with the capacity to transform relationships with citizens, businesses, and other government units. The technology can serve diverse functions, including providing better services to citizens, enhancing interactions with the business and industrial sectors, empowering the public through access to information, and improving governmental management efficiency. The outcomes include reduced corruption, increased transparency, greater convenience, higher state revenues, and/or cost reduction (Grönlund, 2008). E-Government represents the forefront of government efforts to provide information and services to citizens, business groups, government employees, and civil society organizations (Yu-Che & Perry, 2003).

Furthermore, Awan (2015) states that E-Government is an electronic interaction (including transactions and information exchange) between the government, the public (citizens and businesses), and employees. Through E-Government, many objectives can be better served, including the provision of government services to citizens, improved communication with businesses and industries, community empowerment through access to information, and more competent government management. One of the most prominent E-Government services is the provision and use of online information pages, commonly known as the World Wide Web.

The essence of E-Government is to provide online services that are easily accessible to everyone, at any time and place. Moreover, E-Government aims to deliver services without the intervention of public institution employees and without long, complicated queues. Therefore, the fundamental goals are:

a. Improving the quality of public services through the use of IT in governmental processes;
b. Establishing clean, transparent, and responsive governance capable of effectively addressing demands for change; and
c. Enhancing government organization, management systems, and work processes (Blueprint of E-Government Application System, 2004).

E-Government in Public Services

In general, the goal of e-government is to enhance service relationships between the government and various stakeholders, such as citizens, private sectors, tourists, and other government institutions. Globally, e-government is associated with efforts to improve connectivity, availability, and interaction models between the government and citizens. It is also linked to the current transformation of government services, particularly in efforts to increase efficiency, improve processes, and automate tasks that were previously carried out by government employees.

The main objective of e-government services is to meet the needs and demands of stakeholders. This objective is not driven primarily by internal mechanisms but rather by external factors, such as citizens' demands and expectations, which are collected and used as a basis for decision-making in providing information technology. If e-government services are truly intended for the benefit of citizens, it is reasonable for the government to seek to understand citizens' desires and expectations regarding e-government services (Mundy & Musa, 2010). E-Government is also a way for governments to use new technology to provide citizens with convenient access to information and government services, improve service quality, and offer greater opportunities for participation in democratic processes and

institutions. Holmes defines e-Government as: "…the use of information technology, in particular the Internet, to deliver public services in a much more convenient, customer-oriented, cost-effective, and altogether different and better way. It affects an agency's dealings with citizens, businesses, and other public agencies as well as its internal business processes and employees" (Holmes, 2001).

The implementation of e-government has become a societal demand for better services. Additionally, due to the implementation of regional autonomy, governments (central or local) must implement it despite existing limitations. According to Rasyid (2000), in implementing good governance and e-government, four basic principles must be considered: legal certainty, transparency, accountability, and professionalism to improve services and empower society. Hardijanto (2000) further emphasizes that service improvements must be continuously pursued by optimizing service standards with the principles of speed, accuracy, satisfaction, transparency, and non-discrimination, while applying accountability and efficiency considerations.

Parasuraman et al. (1988) argue that public services supported by information technology are now very important, as one dimension of service quality is service speed. The shift in communication models driven by information and communication technology development has not only affected the private sector but also increasingly impacts the public sector. A tangible manifestation of government commitment is e-Government, which changes the interaction patterns between government and citizens. Services that were previously queue-oriented (in-line) have shifted to online services accessible through government websites.

E-Government models implemented in various countries often use the four-stage development model for long-term planning. For example, New Zealand's e-government stages consist of four phases: 1) Web presence; 2) Interaction; 3) Transaction; and 4) Transformation (Simangunsong, 2010). To develop e-government, the World Bank (2002) proposed four phases: Presence, Interaction, Transaction, and Transformation (Yustianto, 2006). The same model was suggested by Gartner Research (Gupta, 2004) through the Value Chain of E-Service, establishing four stages specifically developed in the context of e-governance.

When contextualized for developing e-government websites in Indonesia, the four development phases are:

a. Presence – Launching regional government websites on the internet, displaying basic information needed by the public.
b. Interaction – Regional websites providing facilities for interaction between citizens and local governments. This stage includes more varied information, such as downloadable resources and email communication features on government websites.
c. Transaction – Regional government websites equipped not only with interaction facilities but also with public service transaction features.
d. Transformation – Government services are improved in an integrated manner (Gupta, 2004)..

Public Service Innovation.

Innovation relates to something new for individuals, organizations, communities, or particular situations. Innovation itself includes the development and implementation of something new. The term "new" here does not necessarily mean an entirely original product but refers more to newness. This newness implies that innovation involves creating and implementing something existing into a new combination. Newness is also related to dimensions of space and time (Prabowo et al., 2022). Innovation consists of generating new ideas and implementing them into new products, processes, or services through a long and cumulative process involving numerous organizational decision-making stages, from the idea generation phase to the implementation stage (Urabe et al., 1988).

Innovation is viewed as a process of adopting or implementing new ideas, where these ideas are transformed into actual products or services (Godin, 2014; Osborne, 2013). Historically, innovation has been more prominent in the private sector, which can escape various obstacles that inhibit innovation. The private sector has embraced the philosophy of "innovate or die," whereas the public sector still treats innovation as optional or discretionary. Public institutions never face the risk of "ceasing to exist" if they do not innovate at all. While

the government may not disappear without innovation, it would certainly lose legitimacy and public trust (Prabowo et al., 2022).

The potential benefits of public sector innovation are significant, with public sector size varying by country. On average, the public sector constitutes about one-third of a country's economy. This indicates that public sector innovation has the potential to contribute significantly to economic growth and national prosperity—directly by reducing the cost of public service delivery and improving service quality and structure, and indirectly by enhancing the private sector's productivity through the expansion and improvement of public infrastructure that the private sector relies on (Osborne & Brown, 2012).

Innovation is necessary to improve and even enhance the quality, efficiency, and effectiveness of public service delivery. Through innovation, systems, methods, and technologies can be developed to reduce costs, shorten service time, streamline bureaucracy, and, most importantly, foster public trust in government performance. Public service innovation represents breakthroughs in service delivery, whether through original creative ideas or adaptations/modifications that provide direct or indirect benefits to society. Original creative ideas reflect the positive value of public service providers in offering novelty in their services (Prabowo et al., 2022).

Public sector innovation has emerged from studies largely dominated by private sector innovation (Moore & Hartley, 2008; Torfing et al., 2020). Innovation is also critical for effective public service management in dynamic societies with increasing diversity, where individuals demand higher-quality public services. New ICT and communication technologies, new work practices, new forms of social and family organizations, and societal changes have led to the fragmentation of previously homogeneous social groups into diverse communities.

According to Kuratko (2007), innovation consists of four types:

a. Invention – The creation of a new product, service, or process that has never been done before. This concept is often considered revolutionary.
b. Extension – The development of an existing product, service, or process. This involves applying an existing idea in a different way.
c. Duplication – Imitation of an existing product, service, or process. However, duplication is not mere copying; it involves adding creative touches to improve the concept and compete effectively.
d. Synthesis – The combination of existing concepts and factors into a new formulation. This process involves taking several previously discovered ideas or products and shaping them into a product that can be applied in a novel way.

Public sector innovation can relate to new outcomes (e.g., new services), processes to achieve those outcomes (e.g., co-design methods), and support mechanisms that facilitate these processes (e.g., innovation labs supporting teams in co-design to achieve innovative results) (Nählinder & Eriksson, 2019). Public sector innovation is often driven by public sector agents (e.g., civil servants, public institutions, state-owned enterprises), and as noted, it frequently involves or impacts actors across the entire ecosystem. However, public sector innovation can sometimes be driven more by actors outside the public sector than within it.

3. Materials and Method

Based on the objectives of this study, which aim to describe, explain, or depict the research results in a comprehensive and in-depth manner, the type of research employed is qualitative research. The study, "Transformation of Public Services through E-Government in the Klampid New Generation Application," is a qualitative study using a Case Study approach conducted at the Department of Population and Civil Registration of Surabaya City. According to Yin (2015), a case study is a preferred research method for tracing contemporary events when the events in question cannot be manipulated. The data collection techniques used in this study include interviews, observations, documentation, and literature review. Informants are selected continuously using purposive sampling, including the Head of the Department of Population and Civil Registration of Surabaya City, the Department Secretary, and the Heads of Divisions or Sections.

The data analysis technique employed follows the method developed by McNabb (2002), which includes: Grouping the data according to key constructs, Identifying bases for interpretation, Developing generalizations from the data, Testing alternative interpretations and Forming and/or refining generalizable theory from the case study

4. Results and Discussion

E-Government is part of bureaucratic modernization efforts aimed at improving the quality of public services through the utilization of information and communication technology (ICT). In this study, the analysis is conducted based on the e-government stage model, which illustrates the development of digital technology use in the administration of public services at the Department of Population and Civil Registration. Based on the research objectives related to the Transformation of Public Services through E-Government in the Klampid New Generation Application, it is necessary to examine the stages of the public service transformation process through e-government at the Department of Population and Civil Registration of Surabaya City. According to the Gartner Group model, there are four stages in the implementation of e-government.

a. Presence

The presence stage is the phase in which the government begins to utilize technological developments as a means of providing information accessible to the public via the internet, such as through a website. In this presence or preparation stage, the Department of Population and Civil Registration of Surabaya City uses its website and the Klampid New Generation application as online information platforms accessible to the public. In the context of population administration services at the Department of Population and Civil Registration of Surabaya City, the presence dimension is realized through the development of the KLAMPID New Generation application as a digital platform that provides various information related to population administration services. This application is a digital service innovation developed by the Surabaya City Government to facilitate public access to various population services without needing to visit the service office in person.

Based on the research findings, the implementation of the presence dimension in the KLAMPID New Generation application can be observed through the following aspects:

1) Availability of Digital Service Information

   The KLAMPID New Generation application provides various information related to types of population administration services, such as the issuance of Family Cards (KK), Electronic Identity Cards (KTP-el), birth certificates, death certificates, and population relocation services. The information provided includes administrative requirements, service application procedures, service process flow, and estimated document completion times. The availability of this information helps the public understand the service process before submitting applications online. Consequently, the public can prepare the required documents more completely and reduce errors in service applications.

2) Transparency of Service Procedures

   At the presence stage, information transparency is a crucial aspect in building public trust in government digital services. The KLAMPID New Generation application clearly displays the steps of the population administration service process, from registration and document verification to the issuance of population documents. This transparency helps the public understand the service mechanism and reduces uncertainty regarding administrative procedures. Furthermore, information openness is part of the government's effort to implement good governance principles, particularly regarding accountability and transparency in public services.

3) Accessibility of Service Information

   The presence dimension is also related to the ease of public access to service information. Through the KLAMPID New Generation application, the public can access service information anytime and anywhere using digital devices such as smartphones or computers. This ease of access represents a transformation of public services from conventional systems to digital systems. Previously, the public had to visit the Dispendukcapil office directly to obtain service information, but with the KLAMPID New Generation application, this information is available online without time or location limitations.

4) Provision of Institutional Profile and Service Information

   In addition to procedural information, the KLAMPID New Generation application also provides information about the institutional profile, service vision and mission, and the types of services offered by the Department of Population and Civil Registration of Surabaya City. This information serves to introduce the service-providing agency to the public and provides an understanding of the agency's roles and functions in population

administration. The availability of the institutional profile also demonstrates the local government's commitment to providing transparent, technology-based public services.

5) Socialization of Digital Services to the Public

The presence stage is not only about providing a digital platform but also about the government's efforts to introduce these services to the public. Based on the research findings, the Department of Population and Civil Registration of Surabaya City conducts various socialization activities related to the use of the KLAMPID New Generation application through social media, the city government's official website, and outreach programs at the sub-district and village levels. These socialization efforts aim to increase public awareness of the digital services and encourage the community to utilize the application for managing population documents..

The findings of this study are in line with the opinion of Mulyadi (2016), who stated that the use of web-based applications represents the utilization of technological advancements within the concept of e-government, aimed at enhancing government access to citizens, businesses, and other government entities. Open access by the government to the public is a form of fulfilling societal needs through public services for all members of the community without exception. According to Gita (2015), public service is a series of activities aimed at fulfilling service needs in accordance with laws and regulations for every citizen and resident concerning goods, services, and administrative services provided by public service providers.

On the website and the KLAMPID New Generation application of the Department of Population and Civil Registration of Surabaya City, there is a variety of information accessible to the public, such as the agency's background, organizational structure, main duties and functions, address, contact information, social media, and types of available services. The use of a website in the early stages of e-government development also represents an effort to meet one of the characteristics of good public service, namely the provision of facilities and infrastructure (Neneng, 2016).

Furthermore, the use of websites and applications also demonstrates efforts to transform public services, because, according to Indrajid (2004), one characteristic of public service transformation is the shift from physical knowledge to digital knowledge, where transformation enables the dissemination of knowledge physically to become digital. This makes the distribution of information faster and more efficient through the use of applications such as homepages, websites, email, and so on. Therefore, according to the United Nations (2014), e-government becomes the most important tool in public sector service transformation. Websites can serve as a means of delivering information, conducting service transactions, and facilitating communication between the government and the public if their use is optimized by continuously developing the features within them.

b. Interaction

At the interaction stage, two-way interaction or communication begins to occur between the public and the government as the service provider. The interaction stage can be observed through the emergence of two-way communication between the agency and the community. The interaction dimension is a stage of e-government development that allows for two-way communication between the government and the public through digital media. At this stage, the public not only receives service information but can also interact with government service systems to obtain further information or submit service requests.

Based on the research findings, the implementation of the interaction dimension on the KLAMPID New Generation website and application shows that the Surabaya City Government has provided various interactive features that enable the public to communicate with officials of the population administration services online.

1) Communication Features between the Public and Officials

The KLAMPID New Generation website and application provide communication features that allow the public to obtain information about the service processes they have submitted. Through this system, the public can monitor the status of their population document requests and receive notifications if any documents are missing and need to be completed. This interaction demonstrates a two-way communication relationship between service users and officials at the Department of Population and Civil Registration of Surabaya City.

2) Complaint and Consultation Facilities

The interaction dimension is also evident from the availability of complaint and consultation facilities within the application. The public can submit questions or complaints related to population administration services through the provided system. The presence of these facilities offers a participatory space for the public to express their concerns and obtain solutions to problems encountered during the processing of population documents.

3) Service Process Notification System

The KLAMPID New Generation website and application also provide a notification system that informs the public about the progress of document requests. Notifications include information on whether documents have been received, are under verification, or have been completed. This notification system helps the public track service progress without having to visit the service office directly, thereby improving time and cost efficiency.

4) Increasing Public Participation in Public Services

Through the interaction features available in the KLAMPID New Generation application, the public has greater opportunities to be involved in public service processes. This indicates that digitalization of services not only focuses on administrative efficiency but also on increasing public participation in the provision of public services..

Although interaction features are available, this study found that not all members of the public utilize the communication facilities provided in the application. Some people still prefer to visit the service office directly because they feel it is easier to obtain explanations firsthand from service officers. In addition, limited digital literacy among certain segments of the public also poses a challenge in maximizing the use of interactive features in the KLAMPID New Generation application.

The research findings align with Nugraha (2018), who stated that the utilization of e-government services is expected to improve public service delivery because public access to government information has become increasingly easier. In this context, the Department of Population and Civil Registration (DISPENDUKCAPIL) of Surabaya City uses websites, applications, and social media as channels to provide information and communicate with the public. On social media platforms such as Instagram and Facebook, the public can ask questions or submit complaints, criticisms, and suggestions through the comment section or direct messages. Officers respond to these inquiries during working hours, creating a two-way interaction between the government and the public.

To support effective interaction, the government must be able to select communication channels that facilitate public engagement in order to fulfill one of the characteristics of good public service, according to Neneng (2016), which is the ability to communicate effectively. At the transaction stage, the features provided not only deliver information about services at the Department of Population and Civil Registration of Surabaya City, but also include online communication facilities, thereby enabling two-way communication between the government and the public. This effort helps strengthen the relationship between the government and the community, as public feedback, suggestions, and input regarding services at the department serve as a basis for improving the quality of public services. Through interaction with the community, the government can understand public needs and identify obstacles encountered.

This aligns with Hardjaloka (2014), who stated that platforms enabling two-way communication can enhance government responsiveness to the public. The study findings also correspond with Layne and Lee (2001), who explained that the implementation of e-government evolves through four main stages: catalogue (presence), interaction, transaction, and transformation. The interaction stage is evident through two-way communication between the public and government agencies via digital media such as online complaint services, email, and social media. The public can submit questions or complaints related to population administration services, while the government provides responses to the issues raised by the public..

c. Transaction.

At the transaction stage, it becomes possible for transactions to occur within an application, whether in the form of goods or services exchanged over the internet. The transaction dimension is a stage in e-government development that allows the public to carry out the full public service process electronically, from submitting requests to completing

services. At this stage, digital systems not only provide information and communication but also facilitate administrative processes online.

Based on the research findings, the implementation of the transaction dimension in the KLAMPID New Generation application has enabled the public to carry out various population administration services online without having to visit the Department of Population and Civil Registration of Surabaya City in person.

1) Online Submission of Population Administration Services

   Through the KLAMPID New Generation application, the public can submit various population administration services online, such as the creation of birth certificates, death certificates, family card changes, and other population documents. The submission process is carried out by filling out electronic forms and uploading the required documents through the application system.

2) Digital Document Verification Process

   After submitting a service request, officers at the Department of Population and Civil Registration of Surabaya City perform a digital verification process via the KLAMPID New Generation application. This verification ensures that the submitted documents meet the established administrative requirements before the population documents are issued.

3) Time and Cost Efficiency in Service Delivery

   The implementation of digital transaction systems in population administration services provides significant benefits to the public. With online services, citizens no longer need to visit the service office just to submit document requests. This results in reduced transportation costs and increased efficiency in service time for the public.

4) Transparency in the Service Process

   The digital transaction system implemented through the KLAMPID New Generation application also enhances transparency in public service processes. The public can monitor the status of their service requests in real time and track the ongoing stages of the service process. This transparency contributes to building public trust in service delivery.

The research findings are in accordance with the e-government development model proposed by Layne and Lee (2001), which explains that the implementation of e-government develops through four main stages: catalogue (presence), interaction, transaction, and transformation. At the transaction stage, the public is able to carry out various population administration services online, such as submitting requests for population documents through a digital service system. This indicates that public services are no longer solely focused on providing information but have evolved into digital transaction services that allow the public to complete administrative processes.

d. Transformation

The transformation stage is marked by collaboration with other institutions. Such collaboration can occur at the level of processes, data, or technology. The transformation dimension represents the highest stage in e-government development, characterized by the comprehensive integration of government service systems and fundamental changes in public service delivery. At this stage, information technology is not only used as a service tool but also as a means of bureaucratic transformation toward an integrated digital government system.

Based on the research findings, the implementation of the transformation dimension in the KLAMPID New Generation application shows efforts to integrate population administration services in Surabaya.

1) Integration of Population Administration Services

   The KLAMPID New Generation application integrates various types of population administration services into a single digital system. The public can access multiple population services through one platform without having to use different systems. This service integration facilitates more efficient handling of various population documents.

2) Changes in Public Service Patterns

   The KLAMPID New Generation application also brings significant changes to public service patterns at the Surabaya Population and Civil Registration Office. While previously population administration services were conducted face-to-face at service

offices, now most service processes can be carried out digitally. This transformation reflects a paradigm shift from conventional services to information technology–based services.

3) Improvement of Bureaucratic Effectiveness and Efficiency

With the integration of digital service systems, administrative processes become faster and more efficient. The digital system allows centralized processing of population data, simplifying data management and accelerating service delivery. This also supports the government's efforts to achieve more effective and efficient governance..

5. Conclusion

Based on the research findings regarding Public Service Transformation through E-Government in the KLAMPID New Generation Application at the Surabaya Population and Civil Registration Office, it can be concluded that:

First, in the presence dimension, the Surabaya city government has provided a digital platform that offers open and easily accessible information on population administration services to the public. Through the KLAMPID New Generation application, citizens can obtain information on various types of population services, administrative requirements, and procedures for submitting service requests online. Second, in the interaction dimension, the KLAMPID New Generation application provides various features that enable two-way communication between citizens and service providers. Through notification systems, monitoring of application statuses, and service consultation facilities, the public can interact directly with service officers without needing to visit the service office. Third, in the transaction dimension, the KLAMPID New Generation application allows citizens to carry out population administration service requests online. Fourth, in the transformation dimension, the KLAMPID New Generation application demonstrates a shift in public service systems toward more integrated, digital-based services.

These research findings contribute to the development of studies in the field of e-government and public administration, particularly regarding public service transformation based on information technology. The study reinforces the e-government development stage theory, which explains that the implementation of e-government progresses gradually from presence, interaction, and transaction to transformation. This research also provides empirical evidence that the utilization of information technology in public services can enhance transparency, efficiency, and service quality for citizens. This aligns with the concept of e-government, which emphasizes leveraging digital technology as a means to improve governmental effectiveness and accountability.

Practically, the research results provide several implications for the management of population administration services in local government. The Surabaya city government needs to continuously improve the quality and stability of the KLAMPID New Generation application to provide more optimal services to the public. Developing a more reliable information technology system will help enhance the effectiveness of population administration services. The local government also needs to conduct ongoing socialization and education for the public regarding the use of digital services in population administration. Furthermore, the Surabaya city government should develop integration between the digital service system and other public services to create a more unified and efficient service system. This service system integration can also support the implementation of a digital government concept and the development of an information technology–based city.

Research on public service transformation through the implementation of e-government in the KLAMPID New Generation application at the Surabaya Population and Civil Registration Office has several limitations that need to be considered when interpreting the results. This study focuses solely on e-government implementation in population administration services at a single local government agency, namely the Surabaya Population and Civil Registration Office. Therefore, the findings may not be widely generalizable to other local government agencies with different organizational characteristics, resources, and service systems. Additionally, this study has not comprehensively examined citizens' digital literacy levels quantitatively, which may affect the utilization of digital services. Future research could adopt a mixed-methods approach to provide a more comprehensive overview of the effectiveness of e-government based public services.

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