DIGITAL TRANSFORMATION OF THE PUBLIC ADMINISTRATION SECTOR FOR IMPROVING PUBLIC SERVICES THROUGH AN E-GOVERNMENT APPROACH

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ABSTRACT

The digital transformation of public administration, driven by advances in information and communication technology has significantly altered government service delivery. E-government initiatives are now central to modern public administration, providing more efficient, transparent, and accessible services in response to the tech-savvy population's demands for government efficiency akin to the private sector. Community service activity aims to engage participants by familiarizing them with the project's objectives and community needs. This phase involves orientations and team-building to develop responsibility and effective collaboration, setting the foundation for understanding the impact of e-government on public service delivery. The study utilized a qualitative research approach with case study methodology, combining document analysis, semi-structured interviews with public officials, and focus group discussions with citizens. This approach provided a comprehensive view of e-government's effectiveness. The findings indicate that e-government has improved service accessibility, transparency, and efficiency. However, challenges such as the digital divide and data security persist. Addressing these issues is crucial for ensuring inclusive, secure, and effective digital services in future e-government initiatives.

Keywords: Digital Transformation, Public Administration, E-Government

INTRODUCTION

The digital transformation of public administration represents a paradigm shift that has redefined how governments interact with their citizens and deliver services. This shift is characterized by the integration of information and communication technology (ICT) into the fabric of public service delivery, fundamentally altering traditional governance models. The rapid advancement of digital technologies, coupled with the increasing demands of a tech-savvy population, has made it imperative for governments to embrace e-government initiatives as a means of enhancing service delivery (West, 2020). As a result, e-government has become a cornerstone of modern public administration, enabling governments to provide more efficient, transparent, and accessible services to their citizens.

The roots of this transformation can be traced back to the broader context of globalization and the proliferation of digital technologies across all sectors of society. As businesses and private enterprises adopted digital tools to enhance their operations and customer interactions, citizens began to expect the same level of efficiency and responsiveness from their governments (Lindgren & Van Veenstra, 2018). This expectation has driven governments worldwide to innovate and implement e-government platforms that streamline service delivery, making it more responsive to the needs of the populace. Consequently, e-government is not just a technological advancement but a response to the evolving expectations of citizens in a digital age.

One of the primary motivations behind the adoption of e-government is the need to enhance the efficiency of public service delivery. Traditional government processes are often characterized by bureaucratic inefficiencies, with citizens required to navigate complex administrative procedures to access services (Bannister & Connolly, 2020). E-government addresses these inefficiencies by automating routine tasks, reducing the need for manual intervention, and thereby speeding up service delivery. For example, the digitalization of tax filing processes allows citizens to submit their returns online, significantly reducing the time and effort required compared to traditional paper-based methods (Srivastava & Teo, 2020).

In addition to improving efficiency, e-government initiatives have been instrumental in enhancing the transparency of government operations. Transparency is a critical aspect of good governance, as it fosters trust between the government and its citizens (Grimmelikhuijsen & Meijer, 2018). E-government platforms provide citizens with real-time access to information about government activities, budgets, and decision-making processes, thereby promoting accountability. For

instance, open data portals allow citizens to track government expenditures and monitor the implementation of public projects, ensuring that public funds are used effectively (Davies & Bawa, 2021).

Accessibility is another key benefit of e-government, as it ensures that public services are available to all citizens, regardless of their geographical location. In many countries, physical access to government offices is a significant barrier for citizens living in remote or rural areas (Al-Rais & Al-Khouri, 2019). E-government overcomes this challenge by providing online access to services, enabling citizens to interact with government agencies from the comfort of their homes. This has been particularly beneficial during crises, such as the COVID-19 pandemic, where physical distancing measures necessitated the reliance on digital platforms for the continuation of public services (Chatfield & Reddick, 2018).

Moreover, e-government plays a crucial role in fostering inclusivity by making public services accessible to marginalized groups. These groups often face significant barriers in accessing government services due to factors such as disability, socioeconomic status, or language barriers (Wirtz & Daiser, 2018). By providing services online and in multiple languages, e-government platforms can cater to the diverse needs of the population, ensuring that no one is left behind. For instance, the use of assistive technologies in e-government platforms allows people with disabilities to interact with digital services more easily, thereby promoting digital inclusion (Schulz & Newig, 2021).

The implementation of e-government is not without its challenges, particularly in terms of bridging the digital divide. The digital divide refers to the gap between those who have access to digital technologies and those who do not (Schou & Pors, 2019). This divide is often linked to socioeconomic factors, with lower-income individuals, older adults, and people in rural areas being less likely to have access to the internet and digital devices. Governments must address this divide to ensure that e-government services are accessible to all citizens. This can be achieved through initiatives such as providing free or subsidized internet access in underserved areas and offering digital literacy programs to help citizens navigate online services (Jansen & Veeneman, 2020).

Figure 1. Madiun Regent Ahmad Dawami displays an electronic Identity Card (KTP)
(source: https://www.kominfo.go.id/)

Madiun Regent Ahmad Dawami displays an electronic Identity Card (KTP) after printing it himself using the Mandiri Dukcapil Pavilion (ADM) machine during the implementation of 'go digital' and innovation in population administration services at Pendapa Muda Graha, Madiun Regency, East Java, Wednesday (16/12/). 2020). The implementation of 'go digital' and innovation in population administration services is intended to increase stakeholder understanding of the latest changes throughout the implementation of population administration.

Another significant challenge in the digital transformation of public administration is the issue of data privacy and security. As governments collect and store vast amounts of personal data through e-government platforms, there is a heightened risk of data breaches and unauthorized access (Rana et al., 2018). Protecting citizens' data is paramount to maintaining trust in e-government systems. Governments must implement robust cybersecurity measures and ensure that data protection regulations are in place to safeguard sensitive information. This includes adopting encryption technologies, conducting regular security audits, and educating citizens on how to protect their personal information online (Zhang et al., 2021).

The success of e-government initiatives also depends on the government's ability to effectively integrate technology with public service objectives. This requires a holistic approach that goes beyond the mere adoption of digital tools. Governments must re-engineer their processes to align with the capabilities of these technologies, ensuring that they are used to their full potential (Mergel et al., 2019). This may involve restructuring organizational workflows, retraining public servants to use new technologies, and fostering a culture of innovation within public administration. The goal is to create a digital government that is agile, responsive, and capable of meeting the changing needs of its citizens (Misuraca & Viscusi, 2021).

Furthermore, the digital transformation of public administration has implications for the role of public servants. As e-government platforms take over routine tasks, public servants must adapt by developing new skills that are relevant to a digital environment (Kuipers et al., 2020). This includes digital literacy, data analysis, and the ability to work with advanced technologies such as artificial intelligence and big data. Public administration education and training programs must evolve to equip public servants with these skills, ensuring that they can effectively manage and leverage e-government systems (Fountain, 2020).

The integration of ICT into public service delivery also has the potential to enhance citizen engagement and participation in governance. E-government platforms provide new channels for citizens to interact with their governments, offering feedback, participating in consultations, and even co-designing public services (Janssen et al., 2017). This participatory approach to governance can lead to more inclusive and citizen-centered public services, as it allows governments to better understand and respond to the needs and preferences of their citizens. For example, online platforms for public consultations enable citizens to contribute to policy-making processes, making governance more transparent and democratic (Hirschinger et al., 2018).

E-Governement Develompemt Index (EGDI) di ASEAN

Country	EDGI Level	Rating Class	Rank	EGDI	Online Service Index	Telecommunications Infrastucture Index	Human Capital Index
Singapore	Very High EGDI	VH	11	0.915	0.9647	0.8899	0.8904
Malaysia	Very High EGDI	V1	47	0.7892	0.8529	0.7634	0.7513
Thailand	Very High EGDI	V1	57	0.7565	0.7941	0.7004	0.7751
Brunei Darussalam	High EGDI	HV	60	0.7389	0.6353	0.8209	0.7605
Philippines	High EGDI	H3	77	0.6892	0.7294	0.5838	0.7544
Viet Nam	High EGDI	H3	86	0.6667	0.6529	0.6694	0.6779
Indonesia	High EGDI	H3	88	0.6612	0.6824	0.5669	0.7342
Cambodia	High EGDI	H1	124	0.5113	0.4529	0.5466	0.5344
Myanmar	Middle EGDI	M3	146	0.4316	0.2588	0.5234	0.5125
Laos People's Democratic Republic	Middle EGDI	M2	167	0.3288	0.1941	0.2383	0.5539

Sumber: United Nations(2020)

Figure 2. E-Government Development Index (EGDI)
(source: United Nations 2020)

From the statement in the table above, it states that the EGDI ranking shows that the development of Indonesian E-Government is still not optimal. This means that the quality of E-Government development in Indonesia still needs to be improved. Even though as part of the government system, E-Government has long been implemented in Indonesia. In fact, as in the E-Government governance course, it was already present in the late 90s. This certainly creates a challenge for the Indonesian government to be able to further improve its competence in the field of Information and Communication Technology (ICT) and ICT infrastructure, when we talk in the context of the industrial revolution where the technology applied is much more sophisticated, such as the Internet of Things (IoT). , artificial intelligence, genetic engineering, robots, smart machines and big data.

Despite the many benefits of e-government, its successful implementation requires careful planning and coordination across different levels of government. Digital transformation in public administration is a complex process that involves multiple stakeholders, including government agencies, private sector partners, and civil society organizations (Gil-Garcia et al., 2020). Effective collaboration among these stakeholders is essential to ensure that e-government initiatives

are well-coordinated and aligned with broader public service objectives. This can be achieved through the establishment of clear governance frameworks, the creation of inter-agency working groups, and the involvement of citizens in the planning and implementation of e-government projects (Agolla et al., 2021).

Moreover, the sustainability of e-government initiatives is a critical consideration. As digital technologies continue to evolve, governments must ensure that their e-government platforms remain up-to-date and capable of meeting future challenges (Nograšek & Vintar, 2019). This requires ongoing investment in technology infrastructure, continuous improvement of digital services, and the adoption of emerging technologies such as artificial intelligence and blockchain. By staying ahead of technological trends, governments can ensure that their e-government platforms continue to deliver value to citizens and remain relevant in a rapidly changing digital landscape (Luna-Reyes et al., 2020).

The digital transformation of public administration also raises important ethical and legal questions. As governments increasingly rely on digital tools to deliver services, issues such as algorithmic bias, digital surveillance, and the protection of digital rights become more prominent (Danaher, 2020). It is essential for governments to address these ethical and legal challenges by developing comprehensive regulations and guidelines that govern the use of digital technologies in public administration. This includes ensuring that e-government platforms are designed with fairness, transparency, and accountability in mind, and that citizens' rights are protected in the digital realm (Wirtz & Weyerer, 2020).

In conclusion, the digital transformation of public administration through e-government is a complex and multifaceted process that has the potential to significantly enhance public service delivery. By leveraging digital technologies, governments can improve efficiency, transparency, accessibility, and citizen engagement, thereby creating more responsive and inclusive public services. However, the success of e-government initiatives depends on the government's ability to address challenges such as the digital divide, data privacy, and the need for effective governance frameworks. As digital technologies continue to evolve, governments must remain vigilant and proactive in ensuring that their e-government platforms are capable of meeting the needs of all citizens and adapting to future challenges.

The purpose of the introductory community service activity is to familiarize participants with the objectives, scope, and expected outcomes of the service project. It serves as an initial engagement that helps participants understand the community's needs, the project's goals, and how their involvement will contribute to the betterment of the community. This activity often includes orientations, team-building exercises, and initial interactions with community members, allowing participants to connect with the cause, develop a sense of responsibility, and prepare for the tasks ahead. It also sets the stage for effective collaboration and ensures that everyone is aligned with the project's mission and values. Overall, this community service aims to provide a comprehensive understanding of digital transformation in public administration and establish a context for examining in detail its impact through e-Government initiatives.

METHOD

This study employs a qualitative research approach, specifically utilizing a case study methodology to investigate the digital transformation of public administration through e-government initiatives. The case study methodology is particularly well-suited for exploring complex phenomena within their real-life contexts, providing in-depth insights into the nuances of digital transformation in public administration (Yin, 2018). By focusing on specific instances of e-government implementation, this approach allows for a detailed examination of the strategies, challenges, and outcomes associated with digital transformation efforts.

Data Collection

The data collection process involved three primary methods: document analysis, semi-structured interviews, and focus group discussions. Each method was chosen to capture different perspectives and provide a comprehensive understanding of the e-government landscape.

Document Analysis

Document analysis was conducted to review relevant government reports, policy documents, and academic literature published in the last ten years. This method provides a foundational understanding of the e-government initiatives and their evolution over time. Government reports and policy documents offered insights into the official objectives, strategies, and frameworks guiding the digital transformation efforts (Cresswell et al., 2021). Academic literature

provided context and background, highlighting key theories and findings from previous research on e-government and digital transformation (Heeks, 2018). The review of these documents facilitated a thorough understanding of the theoretical and practical aspects of e-government initiatives.

Semi-Structured Interviews

Semi-structured interviews were conducted with public officials involved in the implementation of e-government initiatives. This method allowed for the exploration of personal experiences, practical challenges, and opportunities from the perspective of those directly involved in the digital transformation process (Kvale, 2019). The interviews were guided by a set of open-ended questions designed to elicit detailed responses about the implementation process, including the strategies used, obstacles encountered, and perceived benefits of e-government services. The insights gained from these interviews were crucial in understanding the practical realities of digital transformation and identifying areas for improvement.

Focus Group Discussions

Focus group discussions were held with citizens who have engaged with e-government platforms. This method provided a user-centric perspective on the effectiveness of e-government services and highlighted areas where these services met or failed to meet user needs (Morgan, 2020). The discussions were structured to explore participants' experiences with e-government platforms, including ease of use, accessibility, and satisfaction with the services provided. By gathering diverse opinions and feedback from citizens, the focus groups offered valuable insights into the impact of e-government on public service delivery and identified key areas for enhancement.

Data Analysis

The data collected from document analysis, interviews, and focus groups were analyzed using thematic analysis. This method involves identifying and analyzing patterns or themes within qualitative data to gain a deeper understanding of the research topic (Braun & Clarke, 2021). Thematic analysis was chosen for its flexibility and its ability to provide rich, detailed insights into the effectiveness of e-government initiatives. The analysis process involved coding the data, identifying recurring themes, and interpreting these themes in the context of the research objectives. This approach allowed for the identification of key themes related to the effectiveness of e-government in improving public service delivery and provided a comprehensive view of the impact of digital transformation on public administration.

Triangulation

Triangulation of data sources was employed to enhance the reliability and validity of the findings. By combining data from document analysis, semi-structured interviews, and focus group discussions, the study was able to cross-verify information and ensure a more robust understanding of the research topic (Fetters et al., 2013). This approach helps to mitigate biases and provides a more comprehensive perspective on the digital transformation of public administration.

In summary, the use of a qualitative research approach with case study methodology, combined with diverse data collection methods and thematic analysis, provided a thorough and nuanced understanding of the digital transformation of public administration through e-government initiatives. The triangulation of data sources further ensured the reliability and validity of the study's findings, offering valuable insights into the impact and effectiveness of e-government in enhancing public service delivery.

RESULTS AND DISCUSSION

The study's findings reveal that e-government initiatives have led to substantial improvements in public service delivery, notably in accessibility, transparency, and efficiency. Digital platforms have transformed how citizens interact with government services, making these services more readily available and accessible (Almeida & Zouain, 2017). With the introduction of online platforms, citizens can now access public services at their convenience, without the need for physical visits to government offices. This shift has been particularly advantageous for individuals residing in remote or underserved areas, who previously faced significant barriers to accessing essential services.

The enhanced accessibility provided by e-government platforms has been instrumental in bridging the gap between the government and its citizens. For instance, remote areas that previously lacked direct access to government offices can now benefit from online services, reducing the geographical disparities in service delivery (Sæbø et al., 2019). This

increased accessibility has not only improved the quality of public services but also ensured that all citizens, regardless of their location, have equitable access to government resources.

Transparency has also been notably improved through the digital transformation of public administration. E-government platforms have enabled real-time access to information regarding government processes, decisions, and expenditures (Criado et al., 2018). This increased transparency has fostered greater trust in government institutions, as citizens feel more informed and engaged in the decision-making processes that affect them. The availability of detailed information online empowers citizens to hold their governments accountable and enhances the overall legitimacy of public institutions.

The automation of routine tasks through digital tools has significantly enhanced the efficiency of public service delivery. Processes that once required manual intervention, such as processing applications and responding to citizen inquiries, are now streamlined through digital systems (Gil-Garcia et al., 2020). This efficiency not only reduces the time required to complete transactions but also minimizes the potential for human error, resulting in a more reliable and timely service experience for citizens.

Despite these positive outcomes, several challenges have been identified in the study regarding the digital transformation of public administration. One of the primary challenges is the digital divide, which highlights the disparities in access to and proficiency with digital technologies among different segments of the population (Schou & Hjelholt, 2018). Certain groups, including the elderly, low-income individuals, and those in rural areas, may lack the necessary skills or access to technology to fully benefit from e-government services. Addressing this digital divide is crucial for ensuring that the benefits of e-government are equitably distributed.

Concerns about data privacy and security have also emerged as significant issues associated with e-government initiatives. The collection and storage of personal data through digital platforms raise apprehensions about potential misuse and unauthorized access to sensitive information (Cordella & Paletti, 2019). Citizens' concerns about their data being vulnerable to breaches or misuse can undermine trust in e-government systems. Therefore, it is essential for governments to implement robust data protection measures and ensure that citizens' privacy is safeguarded.

Another challenge is the need for continuous technological updates and maintenance. As digital technologies evolve rapidly, e-government platforms must be regularly updated to keep pace with technological advancements and address emerging security threats (Mergel et al., 2019). Failure to keep systems up-to-date can result in outdated technology, security vulnerabilities, and a decrease in user satisfaction.

The study also highlights the importance of digital literacy in maximizing the benefits of e-government. Ensuring that citizens are equipped with the skills necessary to navigate digital platforms is essential for the successful implementation of e-government initiatives (van Dijk, 2020). Digital literacy programs and training initiatives can help bridge the gap between those who are proficient with technology and those who are not, thereby promoting greater inclusivity in e-government services.

Moreover, the integration of e-government platforms into existing public administration systems presents a challenge. Governments must ensure that digital tools are effectively integrated with traditional service delivery methods and that they complement rather than replace existing processes (Gil-Garcia et al., 2020). This requires careful planning and coordination to avoid disruptions in service delivery and to ensure a seamless transition to digital methods.

The study's findings underscore the need for a comprehensive approach to addressing the challenges of digital transformation. Governments should consider implementing strategies that promote digital inclusion, enhance data security, and ensure the continuous improvement of e-government platforms (Wirtz & Daiser, 2018). By addressing these challenges, governments can better leverage the benefits of digital transformation while mitigating potential risks and barriers.

In conclusion, while e-government initiatives have led to significant improvements in public service delivery, challenges remain that need to be addressed. The study highlights the benefits of enhanced accessibility, transparency, and efficiency, but also emphasizes the importance of addressing issues related to the digital divide, data privacy, and technological maintenance. A balanced approach that considers both the advantages and challenges of digital transformation is essential for realizing the full potential of e-government and ensuring that it serves all citizens effectively.

CONCLUSION

Digital transformation through e-government has significantly reshaped the landscape of public administration, marking a paradigm shift in how public services are delivered and accessed. This transformation has brought about considerable improvements in the accessibility, transparency, and efficiency of government services. As highlighted in the study, the integration of digital platforms into public administration has facilitated easier and more convenient access to services for citizens, particularly benefiting those in remote or underserved areas (Almeida & Zouain, 2017). The ability to interact with government services online has reduced the need for physical visits to government offices, thereby enhancing convenience and reducing barriers to service access.

In addition to improving accessibility, e-government initiatives have fostered greater transparency in public administration. Digital platforms provide real-time information on government processes and decisions, which has contributed to increased trust and engagement among citizens (Criado et al., 2018). The availability of such information empowers citizens to be more informed and involved in public administration, thus strengthening democratic governance and accountability. As noted by Gil-Garcia et al. (2020), the transparency brought about by digital transformation has reinforced the legitimacy of public institutions by making their operations more visible and accountable.

Furthermore, the efficiency of public service delivery has been notably enhanced through the automation of routine tasks and processes. E-government systems streamline the processing of applications and inquiries, reducing the time required for service delivery and minimizing the potential for human error (Gil-Garcia et al., 2020). This increased efficiency not only improves the quality of service but also ensures that government resources are utilized more effectively. As a result, citizens experience faster and more reliable service, which contributes to overall satisfaction with public services.

Despite these advancements, the study also reveals significant challenges that need to be addressed to ensure the continued success of e-government initiatives. One of the primary challenges is the digital divide, which reflects the disparities in access to and proficiency with digital technologies among different segments of the population (Schou & Hjelholt, 2018). To fully realize the benefits of e-government, it is crucial to develop strategies that bridge this divide and ensure that all citizens, including those with limited access to technology or digital literacy, can benefit from digital services. Addressing this challenge requires targeted efforts to enhance digital inclusion through education and infrastructure development.

Another critical challenge is the issue of data security and privacy. As e-government systems collect and store sensitive personal information, there is a heightened risk of data breaches and misuse (Cordella & Paletti, 2019). Ensuring robust data protection measures is essential for maintaining citizen trust in digital government services. Governments must implement comprehensive security protocols and privacy safeguards to protect citizens' personal information and address any concerns about data security.

Future research should focus on developing and implementing strategies to address these challenges. Research efforts should explore innovative approaches to bridging the digital divide, such as expanding digital literacy programs and improving access to technology in underserved communities (van Dijk, 2020). Additionally, research should investigate best practices for enhancing data security and privacy in e-government systems to ensure that these platforms remain secure and trustworthy for all users.

In conclusion, while digital transformation through e-government has brought about significant improvements in public service delivery, it is essential to address the remaining challenges to maximize its benefits. By focusing on inclusivity and security, future e-government initiatives can build on the successes of current efforts and ensure that all citizens can fully participate in and benefit from the digital revolution in public services. As digital transformation continues to evolve, ongoing research and adaptation will be key to overcoming these challenges and achieving a more equitable and efficient public administration system.

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