

# The Lived Experiences of Digital Frontliners in the Philippines: A Qualitative Exploration of Public Service Digital Transformation

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## Abstract

This study explores the lived experiences of digital frontliners—government employees directly involved in implementing and managing digital public services in the Philippines. Using a qualitative, phenomenological approach, in-depth interviews with 10 key informants from various government departments were conducted to understand digital transformation's challenges, strategies, and impacts.

Findings reveal that digital initiatives, such as digitizing payment systems and human resource processes, have significantly improved efficiency, transparency, and service delivery. Participants played crucial roles in integrating these digital systems and leading strategic initiatives across government operations. Despite these advancements, challenges such as outdated technology, insufficient resources, and digital literacy disparities persist, hindering seamless implementation.

Effective collaboration with financial institutions, technology providers, and international organizations is crucial to bridge these gaps. However, it's not just about bridging gaps, it's about continuously improving. Continuous improvement in digital literacy, infrastructure, and policy support, alongside increased budgets and skilled personnel, are vital for sustaining and advancing digital transformation efforts in the public sector. This commitment to continuous improvement is what will drive the success of our digital transformation journey.

The study's findings contribute valuable insights into the complexities of public service digitalization, highlighting the need for targeted interventions to empower digital frontliners. By addressing these challenges and fostering a culture of innovation, the research supports the development of a national program focused on capacity building and continuous professional development, ultimately enhancing the efficiency, transparency, and accessibility of digital public services in the Philippines.

**Keywords:** Digital Frontliners, Public Service Digitalization, Efficiency, Challenges, Collaboration

## INTRODUCTION

The rapid advancement of technology and the pressing need for efficient public service delivery have prompted the Philippines to embark on a significant journey toward digitalization. Despite these efforts, several factors, such as infrastructure limitations, digital literacy disparities, and bureaucratic obstacles, hinder the seamless implementation of digital services. These issues have created a gap in understanding the lived experiences of the government's digital frontliners—those at the forefront of managing and

implementing these technologies. This study is undertaken to explore these factors, identify the challenges faced, and understand the overall impact on service delivery.

Recent literature highlights the transformative potential of digital technologies in enhancing public sector efficiency, transparency, and accessibility. Studies have shown that successful digital transformation requires technological advancements, a supportive organizational culture, and a skilled workforce. Trends in public administration emphasize the importance of capacity building and continuous learning for digital frontliners to adapt to new tools and processes. The Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Digital Government Transformation offer valuable insights into the adoption and impact of digital initiatives in public services, underscoring the need for a holistic approach to digitalization.

Driven by the desire to gain a deeper and clearer understanding of the challenges and experiences of digital frontliners, this study aims to shed light on the nuanced realities of public service digitalization. By focusing on their perspectives, the research seeks to uncover the specific barriers they encounter, their strategies to overcome these obstacles, and their overall perceptions of the digital transformation process. This comprehensive understanding is crucial for developing targeted interventions that address their needs and enhance their capabilities.

Through this study, the researcher aspires to discover new insights into the digitalization of public services. The qualitative exploration of digital frontliners' experiences will reveal the complexities and dynamics of digital transformation from those directly involved in the process. By capturing their voices, the research aims to identify practical solutions and best practices that can be applied to improve the implementation and management of digital technologies in the public sector.

This study's findings are expected to significantly contribute to the country, particularly the Philippine government's digital service. By addressing the identified challenges and proposing strategic recommendations, the research aims to support the development of a national program that empowers digital frontliners. This program will focus on capacity building, continuous professional development, and fostering a culture of innovation within public services. Ultimately, the study aims to enhance the efficiency, transparency, and accessibility of digital public services, promoting more inclusive and effective governance in the Philippines.

## **METHODS**

### **Research Design**

This study employs a qualitative research design to explore the lived experiences of digital frontliners in the Philippines. A phenomenological approach is utilized to understand the participants' perspectives and experiences related to the digital transformation of public services. This method is particularly suited for capturing the complexities and nuances of the participants' interactions with digital technologies and their roles in the public sector.

### **Participants**

The study focuses on digital frontliners, defined as government employees directly involved in implementing and managing digital public services. Participants were purposively selected to ensure a diverse representation across various government departments and agencies. A total of 10 key informants were chosen based on their extensive experience and unique insights into public service digitalization.

### **Data Collection**

Data was collected through semi-structured, in-depth interviews. This method allows for flexibility in exploring participants' experiences while ensuring that key topics are covered. The interview guide was developed based on the study's objectives and relevant literature, encompassing themes such as challenges faced in digitalization, strategies employed, and perceptions of the digital transformation process.

Each interview lasted approximately 60 to 90 minutes and was conducted either in person or via video conferencing, depending on the participants' availability and preference. All interviews were audio-recorded with the participant's consent and subsequently transcribed verbatim for analysis.

### **Data Analysis and Ethical Considerations**

Thematic analysis was employed to analyze the qualitative data. This method involves identifying, analyzing, and reporting patterns (themes) within the data. The analysis followed Braun and Clarke's six-phase framework: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Transcripts were read and re-read to immerse the researcher in the data and gain a comprehensive understanding. Significant features of the data were systematically coded across the entire dataset and then collated into potential themes. These codes were organized into broader themes that capture substantial aspects of the data in relation to the research questions. Themes were reviewed and refined to ensure they accurately reflect the data, involving checking if the themes work in relation to the coded extracts and the entire dataset. Each theme was defined and named, providing a clear focus for the analysis, and a detailed study was written for each theme. Finally, the report was produced, weaving together the narrative of the data with relevant literature to provide a coherent and compelling account of the participants' experiences.

Ethical considerations were paramount in this study. All participants were informed and consented, ensuring they were fully aware of the study's purpose, procedures, and rights, including the right to withdraw at any time. Confidentiality was strictly maintained, with all identifying information anonymized in the transcripts and report. Ethical approval was obtained from the relevant institutional review board before the commencement of the study.

To ensure the trustworthiness of the qualitative data, several strategies were employed. Credibility was achieved through prolonged engagement and triangulation to ensure the data's accuracy and depth. Member checking was conducted by sharing the findings with participants to validate the interpretations. Transferability was ensured by providing detailed descriptions of the research context, participants, and processes, enabling readers to determine the applicability of the findings to other contexts. Dependability was maintained by keeping an audit trail that documented all stages of the research process, from data collection to analysis. Confirmability was ensured through reflexivity, with the researcher acknowledging and reflecting on their potential biases and how these might influence the research process and findings.

## **RESULT AND DISCUSSION**

The integration and implementation of digital technologies are crucial for enhancing public service delivery, with digital frontliners playing key roles. Various digital initiatives, such as digitizing payment systems and human resource processes, aim to improve efficiency and transparency. The primary goals of digitalization focus on improving efficiency, streamlining processes, and enhancing service delivery. Despite these advancements, challenges such as outdated technology, insufficient resources, and digital literacy disparities persist. Collaboration and partnerships with financial institutions, technology providers, and international organizations are essential for bridging resource gaps. Continuous

improvement in digital literacy, infrastructure, and policy support, along with larger budgets and skilled personnel, are vital for sustaining and advancing digital transformation efforts.

### **Integration and Implementation**

Participants from various sectors underscored their roles in the integration and implementation of digital technologies within government operations. Their contributions ensured the seamless incorporation of digital systems, such as online payment integration and strategic digital initiatives across government agencies. For instance, a CTO of a Fintech Company facilitated the embedding of online payments into frontline government services, while a CSC participant led efforts to enhance the Human Resource Information System (HRIS) and launched the Online Appointment Processing System (OAPS).

The relationship between change management and the implementation of Human Resource Information Systems (HRIS) highlights the importance of leadership and employee involvement in successful digital transformations. A study conducted in Isiolo County, Kenya, found that change management plays a crucial role in the successful implementation of HRIS, with a significant portion of success attributed to effective change management practices (Dida et al., 2021).

### **Digital Initiatives**

Participants detailed various digital initiatives they were involved in, highlighting a wide array of digital transformation activities. Examples include enabling digital payments for services like vehicle registration and fines, digitizing tax remittance, and using AI for healthcare innovations. The CSC's initiatives included enhancing the HRIS, implementing an e-Learning Management System (e-LMS), and introducing the Civil Service Eligibility Verification System (CSEVS).

In healthcare, artificial intelligence (AI) innovations have revolutionized service delivery by improving diagnostic accuracy, personalizing treatment strategies, and increasing operational efficiency. Apell and Eriksson (2021) highlight the importance of resource allocation and effective communication among healthcare professionals to optimize AI technologies.

### **Goals of Digitalization**

The goals of digitalization, as described by participants, focused on improving efficiency and service delivery. They emphasized the reduction of physical movement, process automation, and creating agile, responsive systems. The CSC aimed to enhance efficiency, transparency, and accessibility in civil service operations, thereby optimizing resources and improving service delivery to the public.

A study by Darusalam et al. (2023) underscores the significance of digitalization in improving the quality of governance. The study developed an evaluation framework to assess the impact of digitalization on governance quality in Indonesia, revealing that digitalization enhances transparency, service quality, and government accountability. However, the study also noted that digitalization alone does not eliminate issues such as corruption, indicating the need for complementary measures to achieve comprehensive improvements in governance.

Moreover, the role of technology in fostering transparency in government operations is further explored by Shiadeh (2023). Through qualitative research involving interviews with government officials, IT professionals, and policymakers, the study identified several themes, including data integration, real-time access, and automation, as crucial for enhancing transparency. The findings suggest that technological advancements significantly contribute to public trust and accountability, although challenges such as organizational resistance and financial constraints must be addressed to maximize the benefits of digitalization.

### **Efficiency and Service Improvement**

Digital transformation efforts have led to notable improvements in efficiency and service delivery. Participants reported that digital payments and mobile technologies have made public services more accessible and convenient, reducing the need for physical visits. For example, QR-payment systems in local markets have improved service delivery processes. Digital platforms have also enabled remote work capabilities, improved transparency, and accountability through automated tracking and reporting systems. Digital transformation in government has greatly improved efficiency and service delivery by implementing digital payments, mobile technologies, and automated systems, reducing the need for physical visits.

A key example is the use of QR-payment systems in local markets, which streamline transactions, enhance transparency, and reduce errors. Myrick et al. (2022) found that these systems automate cash collection and provide real-time reporting.

Digital platforms have also enabled remote work, crucial during the COVID-19 pandemic. Risi and Pronzato (2021) observed that digital technologies-maintained work continuity, though experiences varied among workers.

Digital technologies enhance government efficiency, transparency, and service delivery, improving governance quality.

### **Challenges and Barriers**

Despite progress, significant challenges persist. Participants faced issues such as outdated technology, insufficient resources, and digital literacy disparities. For example, teachers struggled with integrating digital tools due to obsolete technology and limited resources. Directors highlighted challenges in ensuring equitable access to digital platforms, upgrading IT infrastructure, addressing cybersecurity concerns, and equipping the workforce with necessary digital skills.

Equitable access to digital platforms and the digital literacy gap are additional challenges. Casalino et al. (2020) explores the importance of digital competences for civil servants and creating digital ecosystems to enhance working processes in public organizations. The study underscores the necessity of equipping the workforce with the required digital skills to navigate and utilize new technologies effectively. This includes addressing digital literacy disparities among employees to ensure that all personnel can contribute to and benefit from digital transformation initiatives.

Furthermore, issues such as insufficient resources, cybersecurity concerns, and the need for continuous IT infrastructure upgrades complicate the digital transformation process. Ensuring cybersecurity and protecting sensitive data is critical, as highlighted by Wilner et al. (2021), who discuss the heightened risk of cyberattacks on the healthcare sector during the COVID-19 pandemic.

### **Collaboration and Partnerships**

The importance of partnerships and collaborations was emphasized by many participants. Collaborations with financial institutions and technology providers helped bridge gaps in resources and expertise. For example, a private company representative discussed partnerships that enhanced public service delivery through remote payment options and multi-channel support. The CSC collaborates with various government agencies and international partners like the Asian Development Bank and the World Bank to bolster digital initiatives.

A significant aspect of partnerships is collaboration between government agencies and international organizations. Implementing Digital Innovation Hubs (DIH) in Ukraine as part of the European integration policy exemplifies this. Yurchyshyn et al. (2022) describe the creation of Center 4.0 at the National Technical University of Ukraine, which collaborates with small and medium-sized businesses to support

digital transformation initiatives. These hubs facilitate the exchange of knowledge and resources, fostering innovation and enhancing the digital capabilities of various stakeholders.

### Future Steps

Participants highlighted the need for continuous improvement in digital literacy, infrastructure, and policy support to sustain and advance digital transformation initiatives. They called for larger budgets for technology upgrades, research and development, and hiring skilled IT personnel. Additionally, they emphasized the importance of a continuous improvement mindset involving education, training, and collaboration with both public and private organizations to ensure the success of digitalization efforts.

Digital literacy is a foundational element of digital transformation. Soltovets et al. (2020) emphasize the role of mentoring in developing digital literacy among doctoral students at British universities. The study highlights that librarians can effectively mentor students, fostering their ability to use various digital tools. This approach underscores the importance of continuous education and training to enhance digital skills, which is applicable in academic and governmental settings.

Infrastructure upgrades and policy support are critical for successful digital transformation. Liu et al. (2022) discuss the costs and strategies for intelligent transportation infrastructure upgrades for intelligent connected vehicles (ICVs). The study identifies key elements such as communication base stations, roadside units, and edge computing servers that are essential for supporting advanced digital technologies. The findings suggest that a structured approach to infrastructure upgrades, supported by adequate budgeting and policy frameworks, is necessary for effective digital transformation.

Public support measures and collaboration between government and private sectors play a significant role in digital transformation. Rupeika-Apoga et al. (2022) explore the aspects of public support required for small and medium-sized enterprises (SMEs) to undergo digital transformation. The study reveals that direct financial support, tax incentives, and training programs are crucial for SMEs effectively managing digital transformation. These insights are relevant for government agencies as they develop policies and collaborate with private organizations to facilitate digital initiatives.

### CONCLUSION

The study aimed to explore the integration and implementation of digital technologies in public service delivery. Findings revealed that digital initiatives, such as digitizing payment systems and human resource processes, significantly improved efficiency, transparency, and service delivery. Participants highlighted their roles in embedding digital systems, leading strategic initiatives, and enhancing various government operations. Despite these advancements, challenges such as outdated technology, insufficient resources, and digital literacy disparities persist. Effective collaboration with financial institutions, technology providers, and international organizations is crucial to bridging these gaps. Continuous improvement in digital literacy, infrastructure, and policy support, along with increased budgets and skilled personnel, are essential for sustaining and advancing digital transformation efforts in the public sector.

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