Digital Transformation and Organizational Change: A Study of Lagos State Ministry of Health

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Abstract

Nigeria's public service has traditionally been characterised by bureaucratic processes, paper-based documentation, and limited integration of technology. Hence, the need to embrace digital transformation has become a critical element for public services to enhance efficiency, service delivery, and citizen satisfaction. However, inadequate infrastructure, limited digital skills among public servants, resistance to change, and cybersecurity concerns have become concerns. In view of this, the study examined digital transformation and organisational change in the Lagos State Ministry of Health. The study employed the pragmatism philosophy and quantitative approach in data collection and analysis. A survey research design was used. Seventy-seven (77) out of ninety-eight (98) instruments administered for the study were found usable. The content analytic approach was used in analysing the collected data. Findings revealed that the Ministry of Health's embrace of digital transformation has streamlined organisational processes, reduced bureaucracy, improved data management, enhanced service delivery, and increased citizen engagement. Additionally, it enables the government to leverage data analytics for evidence-based policymaking and resource allocation. Conclusively, the successful implementation of digital transformation necessitates more than just technological advancements. It requires a fundamental shift in organisational culture within the public service, as it has the potential to become more efficient, citizen-centric, and responsive to the evolving needs of Lagosians. The study recommended stakeholder engagement, capacity building, and the development of robust policies to ensure inclusive and accountable digital governance.

Keywords: Digital Transformation, Organisational Change, Nigeria Public Service, Service Delivery, Citizen Engagement

Introduction

The Nigerian public service is undergoing a significant transformation in response to the challenges of the 21st century. Nigeria, like many other developing countries, has recognized the potential of digital transformation to enhance the efficiency and effectiveness of its public service (Adejumo & Adegboye, 2021). Digital transformation involves the use of digital technologies to fundamentally change how organisations operate and deliver value to their stakeholders. Oyebade and Fagbade (2022) assert that digital technologies improve transparency by increasing public access to government data and information, as well as facilitating the tracking and reporting of government activities (Heald, 2018). Recently, the COVID-19 pandemic has accelerated the adoption of digital technologies and procedures in government operations. The pandemic emphasized the significance of digital infrastructure for remote work, online service delivery, and data-driven decision-making (Hassan et al., 2020). Further, Plesner's (2021) asserts that digital technologies are having a significant influence on the roles of public servants, affecting the way they engage with citizens, government agencies, and other stakeholders, including the changing nature of bureaucracy, accountability, and professionalism.

Digital transformation is a broad term that encompasses more than just changing all parts of public sector activities and support services in pursuit of efficiency and effectiveness (Okunola & Adegboye, 2022). A digital government would encompass the whole spectrum of digitalisation, from the fundamental digitalisation of public services to digital infrastructure, governance, and efficient processes, including both front- and back-office service points (LSG, 2023). The digital transformation of the public sector would enable it to function more transparently, sustainably, and effectively. It will also improve access to basic services and data (Adejumo & Adegboye, 2021). The digital public sector in particular will be citizen-centric. As public administrations embark on their digital transformation journey, they encounter challenges linked to changing organisational structures, processes, and cultural factors. According to Nilsson et al. (2022), organisational flexibility is critical for effective digital transformation. The public sector must be able to reconfigure their routines and practices in order to enable new and innovative methods of operation, as this sheds light on the complex challenges and opportunities associated with digital transformation in the public sector. As governments continue to invest in digital technologies, it is critical to understand how these technologies may be leveraged to facilitate organisational change, public service delivery, and other critical public policy objectives.

Consequently, it is important to state at this juncture that Lagos State Ministry of Health recognizes the potential benefits of digital transformation, such as improved healthcare delivery, enhanced data management, and better resource allocation (LSG, 2023). Digital transformation entails utilizing technology to improve operations, services, and decision-making (Oyebade & Fagbade, 2022). It includes a wide variety of operations, such as the implementation of electronic systems, data analytics, automation, and the use of digital platforms for communication and cooperation. The Nigerian public sector suffers from service failure, which is caused by bureaucratic delays in processing the necessary approval (Magbadelo, 2020). A recent report reveals that lack of technology infrastructure, limited resources, resistance to change, and bureaucratic processes that stifle innovation and agility are some of the challenges in the public service (NigeriaTech, 2023). The report emphasizes the critical importance of identifying and addressing these barriers as a form of resistance to change among civil servants based on fear of job loss, which also hinders digitisation in the public sector. Public sector organisations often have a traditional culture and organisational structure that may resist or impede change initiatives (TechCabal, 2021). Employees may be hesitant to adopt new technologies or change their work processes, fearing job insecurity or a lack of relevant skills. Further, the lack of technological infrastructure is a fundamental impediment to digital transformation. Inadequate IT infrastructure, including hardware, software, and networking capabilities, can impede the deployment and effectiveness of digital initiatives (Adejumo & Adegboye, 2021). This can result in delays, system failures, and difficulties in accessing and utilizing necessary data and information.

According to Lawal, Aibinu, Chatwin, Davey, Udoyen, Iheanacho, Sambo, Ibrahim, Alale and Jafaar (2022), most public health organisations in Nigeria use manual methods, and health information documents are primarily reliant on paper-based procedures. Limited resources, both financial and human, present challenges. Budget limits and conflicting goals frequently plague public sector organisations, making it difficult to allocate sufficient funds and manpower to digital transformation projects (Pulse Nigeria, 2022). Hence, inadequate financing might result in ineffective implementation, inadequate training, and a lack of continuing support and maintenance. More so, bureaucratic procedures within the public service can stifle creativity and ability, both of which are required for effective digital transformation initiatives.

To address these challenges, limited studies have been carried out by scholars on the subject matter of the study. The existing literature on digital transformation in the public sector highlights the importance of factors such as leadership, organizational culture, technological

readiness, and change management in driving successful digital initiatives. However, there is a paucity of research that specifically examines the experiences and challenges of digital transformation within the Nigerian public service. Scholars such as Okunola and Adegboye (2022), Oyebade and Fagbade (2022), and Adejumo and Adegboye (2021) have conducted research on organisational change in public service. The problem addressed in this study is the challenges and barriers faced in implementing digital transformation and organisational change, specifically within the health sector. Therefore, this study seeks to fill this gap by providing an in-depth analysis of the digital transformation efforts in the Lagos State Ministry of Health as a study. Based on the aforementioned, the study examines digital transformation and organisational change in Lagos State public service.

Objectives of the Study

The overall objective of this research is to investigate the relationship between digital transformation and organizational change in public service, as evidenced in the Lagos State Ministry of Health. The specific objectives of this study include:

i. Examine the relationship between technological innovation and public service delivery in the Lagos State Ministry of Health.

ii. Evaluate the effect of digital literacy on government processes in the Lagos State Ministry of Health.

iii. Examine the relationship between technological infrastructure and change management in the Lagos State Ministry of Health.

Research Questions

In this study, an attempt is made to provide answers to the following research questions.

i. What is the relationship between technological innovation and service delivery in the Lagos State Ministry of Health?

ii. What is the effect of digital literacy on government processes in the Lagos State Ministry of Health?

iii. Is there any relationship between technological infrastructure and change management in the Lagos State Ministry of Health?

Research Hypotheses

This study is geared towards testing the following hypotheses:

H_01: There is no significant relationship between technological innovation and service delivery in the Lagos State Ministry of Health.

$H_0$2: Digital literacy has no significant effect on government processes in the Lagos State Ministry of Health.

$H_0$3: There is no relationship between technological infrastructure and change management in the Lagos State Ministry of Health.

Literature Review

Digital transformation is a global phenomenon that is transforming the way organisations operate and deliver value to their stakeholders. In the public sector, digital transformation is driven by the need to improve efficiency, transparency, and accountability. However, digital transformation is not without its challenges, including resistance to change, inadequate infrastructure, and limited digital literacy (Akeju, Okusanya, Okunade, Ajepe, Allsop & Ebenso, 2022). In Nigeria, the public service is characterized by bureaucratic red tape, inefficiency, and corruption (Ojo & Adebayo, 2021). Digital transformation offers a unique opportunity to transform the public service and improve service delivery.

Technological Innovation and Service Delivery in the Lagos State Ministry of Health

The delivery of efficient and effective healthcare services is a crucial priority for the Nigerian government, particularly in the rapidly growing metropolis of Lagos. The Lagos State Ministry of Health (LSMOH) plays a pivotal role in this endeavour, and technological innovation has been identified as a key driver for improving service delivery (Chukwuma, Bossert & Croke, 2019). The Lagos State Ministry of Health (LSMOH) has been actively embracing technological innovation to enhance service delivery and improve healthcare outcomes for its citizens. This has led to a significant shift in how healthcare is accessed, managed, and delivered within the state (Okunola & Adegboye, 2022). Oyebade and Fagbade (2022) identified the significant strides made by the Lagos State Ministry of Health in leveraging technology to improve healthcare service delivery across the state. Some of the key initiatives include:

- **Electronic Health Records (EHRs):** The LSMOH has implemented EHR systems to digitize patient records, enabling efficient data management, improved patient care coordination, and reduced medical errors (Idike & Amaeshi, 2019). It is important to state at this juncture that EHRs have streamlined administrative processes, reduced paperwork, and facilitated faster access to patient information, leading to more efficient service delivery.

- **Telemedicine and Mobile Health (mHealth):** Telehealth platforms have been introduced to provide remote consultations, especially in underserved areas, increasing access to specialist care and reducing travel time for patients (Chukwuma et al, 2019). Meanwhile, mobile applications have been developed to facilitate appointment booking, medication reminders, and health education campaigns, promoting patient engagement and self-management. It can be argued that telemedicine and mHealth initiatives have expanded access to healthcare services, particularly for underserved communities and remote areas.

- **Data Analytics:** The LSMOH leverages data analytics tools to monitor disease trends, identify health disparities, and inform public health interventions, leading to more effective resource allocation and targeted programmes (Lawal et al, 2022). Consequently, it is important to state at this juncture that data analytics provide insights into patient needs and disease patterns, enabling personalized care plans and preventive measures.

- **Digital Infrastructure:** Investments in robust internet connectivity, data centers, and cybersecurity measures have laid the foundation for a digitally enabled healthcare system (Akeju et al, 2022). It is important to state at this juncture that digital platforms enhance transparency in healthcare service delivery, allowing for better monitoring and accountability.

Effect of Digital Literacy on Government Processes in the Lagos State Ministry of Health

Digital literacy plays a pivotal role in shaping the effectiveness and efficiency of government processes within the Lagos State Ministry of Health (LSMOH). It empowers individuals to effectively engage with digital tools and technologies, ultimately impacting service delivery, communication, and overall administrative operations (Chukwuma et al, 2019). Ojo and Adebayo (2021) alluded that digital literacy is a critical factor in enhancing government processes within the LSMOH. By investing in training programmes, supporting staff development, and addressing the digital divide, the LSMOH now leverages digital literacy to improve communication, data management, service delivery, and overall administrative efficiency. This ultimately led to a more effective, transparent, and accountable healthcare system for the citizens of Lagos State. Oyebade and Fagbade (2022) highlight how digital literacy significantly influences government processes within the LSMOH:

- **Efficient Data Management:** Digital literacy enables staff to effectively utilize electronic health records (EHRs), data analysis tools, and other digital platforms to manage patient data, generate reports, and track health outcomes (Akeju et al, 2022). The ministry's ability to generate robust data-driven insights has strengthened its evidence-based policymaking and programme design. It is important to state at this juncture that it has improved data management that has led to better-informed decision-making, more accurate forecasting, and more targeted resource allocation.

- **Improved Service Delivery:** Digitally literate staff effectively utilize telemedicine platforms, mobile health applications, and online appointment booking systems to improve access to healthcare services, particularly for remote communities and underserved populations (Okunola & Adegboye, 2022). The expansion of telemedicine and mobile health clinics has increased the accessibility of healthcare services, particularly for communities with limited access to traditional healthcare facilities. The citizen engagement platform has made it easier for residents to interact with the ministry, access information, and provide feedback on the quality of services. The digital literacy of both healthcare providers and citizens has enabled more effective utilization of these technological innovations, leading to better overall service delivery.

- **Increased Transparency and Accountability:** Digital literacy empowers citizens to access health information online, participate in online surveys, and provide feedback on government services. This fosters a more transparent and accountable healthcare system by enabling the staff ministry to effectively leverage on these systems to foster greater transparency and accountability. Chukwuma et al. (2019) assert that the digital systems and platforms implemented by the ministry have enhanced transparency in various processes, such as procurement, resource allocation, and service monitoring. Increased data visibility and reporting capabilities have improved the ministry's accountability to the public and oversight bodies.

- **Reduced Costs and Increased Efficiency:** Digital literacy leads to the automation of administrative tasks, reducing paperwork, leading to cost savings and increased efficiency within the LSMOH (Idike & Amaeshi, 2019). The implementation of digital systems and tools has streamlined various operational processes within the ministry. Healthcare providers and staff have become more proficient in using these digital technologies, leading to faster data entry, better record-keeping, and more seamless coordination of patient care (Lawal et al, 2022). It can be argued that the automation of

routine tasks has freed up time and resources, allowing the ministry to focus on higher-level strategic initiatives.

- **Enhanced Communication and Collaboration:** Digitally literate staff could effectively utilise communication platforms, email, and online collaboration tools to facilitate seamless information sharing, improve coordination between departments, and streamline decision-making processes.

- **Adaptability and Resilience:** The ministry's digital transformation has enhanced its ability to adapt to changing circumstances, such as the COVID-19 pandemic, which necessitated a rapid shift to remote and virtual healthcare delivery. The digital literacy of healthcare providers and staff has enabled them to quickly adopt and utilize new technologies, ensuring the continuity of essential healthcare services during challenging times.

Technological Infrastructure and Change Management in the Lagos State Ministry of Health

The Lagos State Ministry of Health (LSMOH) is undergoing a crucial and significant digital transformation, requiring a strong interplay between technological infrastructure and change management for successful implementation (Lawal et al, 2022). Oyebade and Fagbade (2022) alluded that the relationship between technological infrastructure and change management is essential for successful digital transformation in the LSMOH. By investing in robust infrastructure, implementing effective change management strategies, and addressing challenges proactively, the LSMOH can leverage technology to improve healthcare delivery, enhance patient outcomes, and create a more efficient and equitable healthcare system for the citizens of Lagos State. Ojo and Adebayo (2021) take a cursory look at how these two elements interplay, support, and reinforce each other by driving meaningful and sustainable transformation within the healthcare sector, ultimately delivering more efficient and effective services to the citizens of Lagos State.

Technological Infrastructure as an Enabler of Change: Robust technological infrastructure, including reliable internet connectivity, secure data centers, and user-friendly digital platforms, creates the foundation for implementing new processes and workflows (Idike & Amaeshi, 2019). The ministry's investment in robust technological infrastructure, such as digital health records systems, telemedicine platforms, and data analytics tools, has been a key driver of organisational change. These technologies have provided the ministry with the necessary

capabilities to streamline processes, improve data-driven decision-making, and enhance service delivery (LSG, 2023). The availability of this technological infrastructure has empowered the ministry to explore and implement innovative approaches to healthcare provision, paving the way for broader organisational transformation. For example, EHR systems can only be effectively adopted with reliable internet access and robust data storage capabilities.

Change Management as a Critical Prerequisite for Technological Adoption: Effective change management has been essential in ensuring the successful integration and utilization of new technologies within the ministry. The ministry has recognized that simply deploying technology is not enough; it requires a comprehensive change management strategy to address the human and organisational factors that can impact the adoption and integration of these technologies (Okunola & Adegboye, 2022). This has included initiatives such as employee training, change communication, stakeholder engagement, and the establishment of clear processes and governance structures to support the adoption of new technologies.

Synergies between Technological Infrastructure and Change Management: The ministry has leveraged its technological infrastructure to facilitate and support its change management efforts. The data and analytics capabilities provided by the technological infrastructure have also informed the ministry's change management strategies, allowing it to make evidence-based decisions and monitor the impact of organisational changes (Pulse Nigeria, 2022). For example, the digital engagement platforms have enabled more effective communication and collaboration between ministry leadership, healthcare providers, and citizens during the change process. It can be argued that modern communication tools, collaboration platforms, and data-sharing systems enabled by technological infrastructure facilitate seamless communication and collaboration between departments, healthcare providers, and patients, leading to more efficient and effective healthcare delivery.

Iterative Refinement and Continuous Improvement: As new technologies are introduced or existing ones are enhanced, the ministry has continued to adapt its change management approaches to ensure seamless integration and maximum impact (NigeriaTech, 2023). This iterative approach has allowed the ministry to stay agile and responsive to the evolving needs and demands of the healthcare ecosystem. It is important to state at this juncture that the ministry has recognized that technological infrastructure and change management are not one-time initiatives but rather an ongoing process of refinement and improvement.

Change Management as a Foundation for Driving Innovation: A robust technological infrastructure allows the LSMOH to explore and implement innovative solutions like telemedicine, mobile health applications, and data analytics, leading to improved service delivery and enhanced patient outcomes. This approach aims to promote user adoption of new technologies by emphasizing the benefits for staff and patients, highlighting success stories, and providing ongoing support.

Conceptual Model
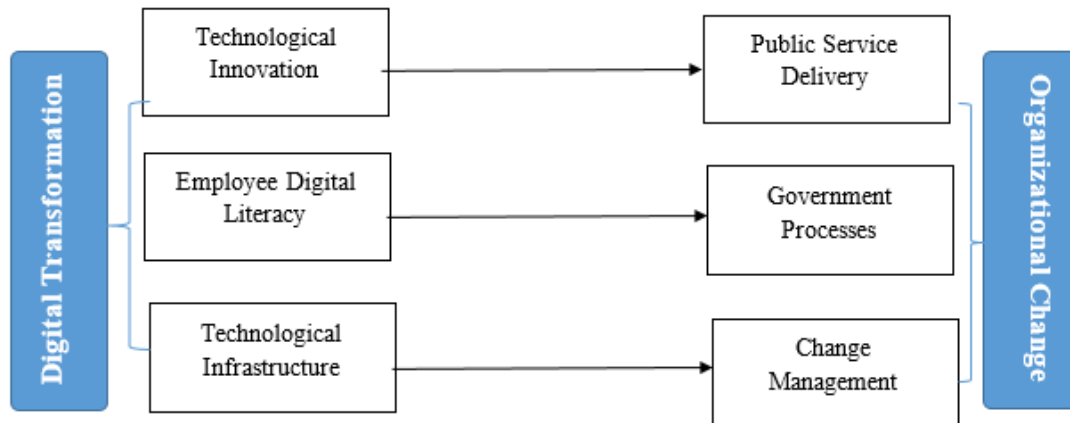
Source: Researcher's Design, 2023.

This model shows the relationship between the independent variable (digital transformation) and the dependent variable (organisational change). Digital transformation is operationalized as technological innovation, employee digital literacy and technological infrastructure while the proxy for organizational change in public service are public service delivery, government processes and change management. The model shows how the variables are linked to one another.

Theoretical Review

The study is situated within the context of digital of innovation theories which are considered suitable for the analysis of this study

Digital of Innovation Theory

The Diffusion of Innovations Theory (DOI) is a sociological theory that was developed by Everett Rogers in the 1960s and has been widely used to study the adoption of new technologies in various settings, including the workplace. This theory explains how new ideas, products, or technologies spread through a population and are adopted by individuals and communities (Rogers, 1962). It's important to note that the Diffusion of Innovations theory provides a

framework for understanding the diffusion process, but it doesn't account for all the factors and complexities involved in civil service transformation (Valente, 1995). Also, socio-political dynamics, power structures, cultural values, and historical contexts play significant roles in shaping the process of civil service transformation (Valente, 1996). The theory suggests that the adoption of new technologies is a process that occurs in stages and that the rate of adoption is influenced by a number of factors, including the perceived benefits of the technology, the cost of the technology, and the perceived risk of the technology (Rogers, 2003).

Furthermore, the Lagos State Ministry of Health has already begun to embrace digital transformation; therefore, it is critical to understand their existing initiatives while assessing the potential weaknesses of the Digital Innovation Theory (DOI). The specific weaknesses of this theory will depend on the unique context and objectives of the Lagos State Ministry of Health's digital transformation activities, as the state has particular challenges to digital transformation, such as infrastructural limitations, digital literacy gaps, institutional concerns, social impact, and resource constraints. These factors may not be entirely addressed by the DOI, necessitating extra considerations and adaptations. Hence, the Lagos State Ministry of Health can evaluate the strengths and shortcomings of DOI and tailor it to the unique circumstances.

Technology-Organisation-Environment (TOE) Theory

The technology-organisation-environment framework, also known as the TOE framework, is a theoretical framework that explains technology adoption in organisations and describes how the process of adopting and implementing technological innovations is influenced by the technological context, organisational context, and environmental context (Hoti, 2015). The TOE Framework has been a valuable contribution to the field of digital transformation, providing organisations with a comprehensive and structured approach to understanding and navigating the complex challenges and opportunities associated with the adoption of new digital technologies. The Technology-Organisation-Environment (TOE) Framework is a well-established model that has been widely used to understand and analyse the factors that influence the adoption and implementation of new technologies within organisations (Oliveira & Martins, 2011).

The TOE Framework can be applied to a variety of industries and organisational contexts, be it public or private sector, making it a flexible and versatile tool for understanding and managing digital transformation (Hoti, 2019). Baker (2012) alluded that the adoption of the TOE Framework has indeed been beneficial for organisations undergoing digital

transformation. By considering these three key dimensions, organisations can better understand the various factors that may facilitate or hinder the successful implementation of new digital technologies (Hoti, 2015). This can help them develop more effective strategies and make more informed decisions during the digital transformation process.

The framework provides a holistic view of the factors that influence technology adoption, allowing organisations to consider a wide range of internal and external factors. By understanding the interplay between technology, organisational, and environmental factors, organisations can make more informed decisions about which technologies to adopt and how to best implement them (Gangwar, Date & Ramaswamy, 2015). As a result, the framework can help organisations anticipate and address potential challenges or resistance to change during the digital transformation process.

The adoption of the Technology-Organization-Environment (TOE) Framework in the context of digital transformation can face several challenges. Successful digital transformation often requires specialized skills, expertise, and resources that may not be readily available within the organisation (Oliveira & Martins, 2011). Developing or acquiring the necessary capabilities can be a significant challenge for public sector organizations. Anticipating and adapting to these environmental factors can be a challenge. In addition, employees may be resistant to the changes brought about by digital transformation, leading to reluctance or even opposition to the implementation of new technologies and processes (Baker, 2012). Overcoming this resistance and fostering a culture of digital readiness can be a significant challenge.

Also, existing organizational structures, processes, and cultures can act as barriers to the adoption of new technologies and the implementation of digital transformation initiatives (Hoti, 2019). Overcoming this inertia and driving organisational change can be a significant challenge. Consequently, integrating new digital technologies with existing systems and ensuring seamless interoperability can be a complex and time-consuming task (Ramdani, Chevers & Williams, 2013). Poorly executed integration can lead to operational disruptions and undermine the success of digital transformation efforts. To address these challenges, organisations may need to adopt a comprehensive change management approach, invest in developing the necessary capabilities, foster a culture of digital readiness, and actively engage with stakeholders throughout the digital transformation process.

In the case of Southwest Nigeria, Akinpelu and Oyedele (2017) refer to the digital transformation and organisational change in Lagos State public service as the process of social,

political, and economic changes that have occurred in the region. Applying this theory to civil service in Southwest Nigeria, insights can be gained into the factors that influence the adoption and impact of innovations. This understanding can inform policymakers, activists, and other stakeholders involved in civil service transformation efforts, helping them design strategies to facilitate the spread and acceptance of transformative ideas, practices, and technologies in the region (Afolabi & Ogunleye, 2022).

Methodology

This study adopted quantitative analysis methods and data collection was carried out using questionnaire instrument. The study population comprised staff members of the Lagos State Ministry of Health. A questionnaire was administered to 98 staff members, and seventy-seven (77) out of ninety-eight (98) instruments administered for the study were found usable. The data were analyzed using both descriptive and inferential statistics. A survey research design was used, and the content analytic approach was used in analysing the collected data so as to identify the critical factors that influence the digital transformation process and the corresponding organisational changes. The study's validity was measured using both construct validity and content validity. While construct validity was designed in line with the convergent and discriminant views of earlier studies, content validity was tested among health practitioners and professionals.

Data Presentation and Analysis

Presentation and Analysis of Quantitative Data

This section details the testing of the hypotheses formulated for the study. The three hypotheses were tested using the permissible statistics. These hypotheses were tested using regression.

Hypothesis One

$H_0 1$: There is no significant relationship between Technological Innovation and Service Delivery in the Lagos State Ministry of Health.

Table 4.1 Regression results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.338	.559		.604	.548
	Technological Innovation	.907	.123	.648	7.364	.000
a. Dependent Variable: Service Delivery						

Source: Field Survey, February (2024)

Table 4.1 presents the result of the estimated regression coefficients. The hypothesis state that there is significant relationship between Technological Innovation and Service Delivery the Lagos State Ministry of Health. According to the result, the linear regression coefficient (α_1) of technological innovation is 0.907, with standard error, t-stat. and p-value of 0.123, 7.364 and 0.000 respectively, revealed that there is a positive regression coefficient (α_1) implies that technological innovation has positive influence on Service Delivery in the Lagos State Ministry of Health, with respect to the p-value (0.000) which is lesser than 5% (0.05) level of significance, but implies that Technological Innovation has significant effects on Service Delivery of the Lagos State Ministry of Health. Therefore, the estimated regression model indicates that the null hypothesis (H_0) should be rejected and the alternative hypothesis H_1 should be accepted. This implies that Technological Innovation has positive influence and significantly affects Service Delivery in the Lagos State Ministry of Health**.**

Based on the above, the first objective lies in this finding. This finding is in line with the extant literature of Ugwu & Nwadike (2023) and Oluwatoyin & Odebode (2017) on innovation and public service delivery. How innovative is the Nigerian bureaucracy? Their study reveals that technological innovations have improved efficiency and accessibility. The innovation has targeted interventions and disease surveillance through mobile health (mHealth) technologies, which have been used for targeted health education, disease surveillance, and outbreak response. Also, telemedicine and online appointment booking have shown promise in reducing wait times and improving access to health care, as well as enhanced data management and analysis in the area of electronic medical records (EMRs), which improve data accuracy, streamline information sharing, and facilitate better decision-making. This innovation has

promoted public health dashboards and open data initiatives, which improve transparency and accountability in service delivery.

Hypothesis Two

H₀2: Digital literacy has no significant effect on government processes in the Lagos State Ministry of Health.

Table 4.2 Regression results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.789	.391		2.015	.047
	Employee Digital Literacy	.835	.086	.745	9.686	.000
a. Dependent Variable: Business Processes						

Source: Field Survey, February (2024)

Table 4.2 presents the result of the estimated regression coefficients. The hypothesis state that employee digital literacy significantly affect business processes of the Lagos State Ministry of Health. According to the result, the linear regression coefficient (α_1) of employee digital Literacy and Business Processes is 0.835, with standard error, t-stat. and p-value of 0.086, 9.686 and 0.000 respectively, revealed that there is a positive regression coefficient (α_1) implies that employee Digital Literacy has positive influence on Business Processes of the Lagos State Ministry of Health, with respect to the p-value (0.000) which is lesser than 5% (0.05) level of significance. Therefore, the estimated regression model indicates that the null hypothesis (*H₀*) should be rejected and the alternative hypothesis H₁ should be accepted. This implies that employee digital literacy has positive influence on the Business Processes of the Lagos State Ministry of Health.

However, the objective of the two findings, which are to evaluate the effect of digital literacy on government processes in the Lagos State Ministry of Health, reveals that employee digital literacy significantly affects the business processes in the Lagos State Ministry of Health. This finding is in line with the views of Ezeala-Oghoghorie (2023) and Akinseinde (2022) on the challenges of implementing digital literacy: prevalence and determinants in Lagos State, Nigeria. Their study reveals that digital literacy among government employees enables them to navigate technology effectively, leading to quicker process completion, better

data management, and increased transparency in information sharing. More so, accessing and utilising digital platforms for appointments, records, and communication improved accessibility and convenience for citizens, potentially reducing wait times and improving overall service delivery. Digital tools facilitated citizen engagement, i.e., communication between the ministry and citizens, allowing for feedback and participation in decision-making processes. This leads to more responsive and citizen-centred healthcare policies. It increases digital literacy among citizens and fosters better communication and engagement with the Ministry through online platforms, surveys, and feedback mechanisms. It also allows better understanding and utilisation of data collected through digital platforms, enabling more informed decision-making and resource allocation within the Ministry.

Hypothesis Three

H$_0$3: There is no relationship between technological infrastructure and change management in the Lagos State Ministry of Health.

Table 4.3 Regression results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.388	.506		2.743	.008
	TF	.634	.111	.549	5.684	.000
a. Dependent Variable: Change management						

Source: Field Survey, February (2024)

Table 4.3 presents the result of the estimated regression coefficients. The hypothesis state that technological infrastructure has become an enabler to change management. According to the result the linear regression coefficient (α_1) of technological infrastructure in enabling change management is 0.634, with standard error, t-stat. and p-value of 0.111, 5.684 and 0.000 respectively, revealed that there is a positive regression coefficient (α_1) implies that technological infrastructure has positive influence on Change Management of the Lagos State Ministry of Health, with respect to the p-value (0.000) which is lesser than 5% (0.05) level of significance.

Therefore, the estimated regression model indicates that the null hypothesis (H_0) should be rejected and the alternative hypothesis H_1 should be accepted. This implies that technological infrastructure has positive influence and significantly affects the Change Management the Lagos State Ministry of Health**.**

Meanwhile, objective three of the study examined the relationship between technological infrastructure and change management in the Lagos State Ministry of Health. The relationship between technological infrastructure and change management in the Lagos State Ministry of Health can be significant and impactful, as the successful implementation of technological infrastructure and change management requires a well-thought-out strategy, strong leadership, and effective stakeholder engagement. The Ministry of Health must align its technological investments with its change management goals and ensure that the infrastructure is scalable, secure, and aligned with the organisation's long-term vision. It is based on the results of the estimated regression coefficients presented in Hypothesis three. This finding is in line with the views of Adeyemo & Oyedele (2014) and Egwunyenga & Anumnu (2018) on the impact of information and communication technology (ICT) on change management in Nigerian organizations. The study reveals the need for robust ICT infrastructure, effective stakeholder engagement, and capacity building for successful implementation, which can be relevant to managing technological changes within Lagos State Ministries. It is on this basis that the study has the convergent opinion that investing in both technological infrastructure and skills development to manage the changing nature of work effectively improves service delivery, citizen engagement, and transparency, which can indirectly contribute to smoother change implementation in the Lagos State Ministry of Health (LSMOH).

Table 4.4: Model Summary for Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.729[a]	.532	.525	.36904	1.829
a. Predictors: (Constant), TI, DL, TF					

Source: Field Survey, February (2024)

Additional evidence of a strong model is shown in Table 4.4.4, where the R square value of 0.7289 suggests the independent is responsible for 72.9 percent of the total variation in digital transformation and organizational change in public service. The remaining 27.1 percent of the

variation is accounted for or explained by non-independent factors. Also, the Durbin Watson (DW) Measure the present of autocorrelation in the data, with the Durbin Watson result of 1.829 (1.5<DW<2.5) there is no present of autocorrelation in the variables used for this study.

Table 4.5: Results of Analysis of Variance

ANOVAᵃ

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	11.595	1	11.595	85.134	.000ᵇ
	Residual	10.214	75	.136		
	Total	21.809	76			
b. Predictors: (Constant), TI, DL, TF.						

Source: Field Survey, February (2024)

As shown in table 4.4.5, the *F*-Statistic of 85.134 with a *p*-value of 0.000 which is less than 1% and 5% levels of significance provide strong evidence that all the explanatory variable digital transformation has significant influence on the organization change of public service. The evidence is points to the fact that digital transformation significantly influences organizational change in public service.

The Lagos State Ministry of Health (LSMOH) has shown commitment to digital transformation in organisational change through initiatives like the "Lagos State Digital Health Transformation Roadmap" and partnerships with organisations like the Bill & Melinda Gates Foundation. The ministry has made a commitment to digitalization through initiatives like telemedicine platforms and electronic health records (EHRs) that have improved patient care by increasing access to healthcare, streamlining processes, and enhancing data-driven decision-making. More so, digital transformation and organisational change have promoted platforms that increase transparency and provide citizens with access to information about healthcare services and their own health records, as well as digital tools that improve the efficiency of the State Ministry of Health in automating tasks, reducing paperwork, and facilitating data sharing.

Discussion of Findings

The findings of the study to reveal that the government often implements digital technologies and streamlined workflows using technological infrastructure like electronic health records

(EHR) systems, telemedicine platforms, data analytics tools, and communication networks. These technologies improve data management, enhance collaboration, and enable evidence-based decision-making. Effective communication and collaboration among stakeholders are essential for successful change management. Technological infrastructure facilitates communication across different departments, teams, and levels of the organisation, enabling efficient data management.

Digital literacy and government processes involve training employees on new processes, procedures, and technologies. Technological infrastructure can support training and education initiatives by providing e-learning platforms, virtual classrooms, and online resources. These tools enable self-paced learning, remote training sessions, and knowledge sharing among employees. Effective technological infrastructure can alleviate resistance from employees by providing user-friendly interfaces, intuitive software, adequate training, and support. Engaging employees in the design and implementation of technological solutions fosters a sense of ownership and empowerment, increasing their willingness to embrace change.

Consequently, the importance of digital transformation and organisational change in public service can be realized through strategic leadership. This would assist government MDAs to communicate a clear vision for digitalisation, smoother transitions, and providing employees with a roadmap for change. Collaboration with external stakeholders, such as private entities and NGOs, is also crucial for navigating complex changes that may arise from the digitalisation exercise.

Conclusion and Recommendations

In conclusion, the study concluded that the Lagos State Ministry of Health should leverage these insights, continuing to invest strategically in these areas to enhance service delivery, empower its workforce, and navigate ongoing digital transformations effectively. This study emphasizes the valuable perspectives to the broader discourse on digital transformation within public service, accentuating its practical implications and the imperative for sustained investment in key technological facets for organisational success.

The following recommendations are put forth to guide the Ministry in navigating this dynamic landscape, ensuring sustainable innovation, and fostering a resilient and adaptable organisational culture. This recommendation aims to address key aspects, from investment

strategies to fostering collaboration, with the overarching goal of positioning the Ministry for successful and continuous transformation in the digital era. The recommendations are:

1. **Prioritize Continued Investment in Technological Innovation:** Ensure consistent and strategic financial allocation to sustain technological advancements, fostering an environment conducive to ongoing digital transformation.

2. **Implement Ongoing Digital Literacy Programmes:** Develop and execute continuous training initiatives aimed at enhancing the digital literacy of the workforce, enabling them to adeptly navigate and utilize evolving technologies.

3. **Strengthen Technological Infrastructure:** Invest in maintaining a resilient and scalable technological infrastructure, incorporating regular updates, robust cybersecurity measures, and the flexibility to accommodate future technological developments.

4. **Foster a Culture of Innovation:** Cultivate an organisational culture that encourages and celebrates innovation, motivating employees to actively contribute ideas and embrace a forward-thinking mindset.

5. **Promote cross-functional collaboration:** Break down departmental silos, encouraging seamless collaboration between different units to ensure a holistic and integrated approach to digital transformation efforts.

Contribution to Knowledge and Policy Implications

The present study significantly contributes to the identification and analysis of key factors influencing digital transformation success within a government setting. By delving into the impact of technological innovation, digital literacy, and technological infrastructure, the study offers nuanced insights into the dynamics that drive or hinder organisational change. Furthermore, the findings of this research contribute valuable empirical evidence to the understanding of how these factors intersect and influence each other within the context of a public health administration. Additionally, the conceptual model developed for this study by the researcher is an additional contribution of this study to the existing body of organized knowledge in the field. Meanwhile, the policy implications for service delivery range from telemedicine and mHealth policies. A clear policy that facilitates the adoption and expansion of telemedicine and mobile health services. This includes establishing regulatory frameworks, standardizing telehealth practices, and addressing reimbursement mechanisms for remote consultations. Furthermore, promoting the use of data analytics for disease surveillance, health outcomes monitoring, and evidence-based decision-making is crucial. Encouraging research

initiatives that leverage digital data to improve healthcare delivery and public health interventions.

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