REVIEWED JOURNAL of INTERNATIONAL SOCIAL SCIENCE & HUMANITIES
[ISSN 2663-127X]
Vol. 5, Iss. 1 (2024), pp 481 – 500, October 12, 2024. www.reviewedjournals.com, ©Reviewed Journals

ENHANCING SERVICE DELIVERY IN PUBLIC SECTOR BY LEVERAGING ON DIGITAL TRANSFORMATION: A CASE OF KIAMBU LEVEL FIVE HOSPITAL

[1] Purity Wamuyu Wachira & [2] Dr. John Kandiri, PhD

[1] Master of Arts in Public Policy and Administration, The School of Law, Arts and Social Sciences, Kenyatta University, Kenya
[2] Lecture, Department of Computing and Information Technology, Kenyatta University, Kenya

Accepted: September 18, 2024

ABSTRACT

In the public sector, the main goal of service delivery is to make sure that people can get to and use important tools and services in a way that meets their needs. Service delivery is very important in the healthcare field, especially in state hospitals, because it has a direct effect on how well patients do and on the health of the people as a whole. Digital change has a big effect on service delivery because it lets companies use flexible organizational structures and connect digital business communities. The goal of this study was to look into how going digital has changed the way services are provided at Kenya's Kiambu Level 5 hospital. The study looked at how customer relationships, growing skills, and constant improvement affect the digital change process. Resource-based view, identify, distinguish, connect, and modify theories, as well as dynamic capability theories, were used to guide the study. Based on a detailed study approach, the study was carried out. The target group was made up of 282 Kiambu Level 5 hospital workers. A group of 165 individuals was used as a sample. Structured surveys and an interview plan were used to gather the data. The study looked at how accurate and reliable research tools were. Descriptive statistics and regression analysis were used to look at quantitative data. Content analysis, on the other hand, was used to look at qualitative data. A strong link (r=0.822, p<.001) was found between the digital change factors and service performance. The study found that the three digital transformation factors can explain about 66.9% of the differences in service performance. Continuous growth (p<.001) and customer interaction (p<.001) were both important. The study found that going digital has a big and good impact on service delivery at Kenya's Kiambu Level 5 Hospital, mainly through bettering relationships with customers and always making things better. The study said that Kiambu Level 5 Hospital should use digital tools to try to keep customers they already have. It was also suggested that the hospital spend money on digital technology to make the hospital more productive and find technology that guarantees on-time delivery of health services.

***Keywords**: Collaboration, Push-Pull Technology, Smallholder Farms*

CITATION: Wachira, P. W., & Kandiri, J. (2024). Enhancing service delivery in public sector by leveraging on digital transformation: A case of Kiambu Level Five Hospital. *Reviewed Journal of Social Science & Humanities*, 5 (1), 481 – 500.

INTRODUCTION

Service delivery is the methodical process by which services are provided to customers or the general populace. It includes a comprehensive array of operations, such as planning, implementation, and assessment of services to ensure they adhere to established standards and satisfy the requirements of the beneficiaries (Osborne, 2020). Key components of service delivery include the availability of resources, the efficiency of service processes, and the quality of outcomes. Researchers typically evaluate service delivery through a multi-dimensional lens, considering aspects like accessibility, timeliness, accuracy, courtesy, and efficiency (Kalonda & Govender, 2021). Effective and operational service delivery systems rely on several aspects. These include a favorable climate, political determination, social action, voter education, community empowerment, an engaged civil society, and suitable training. Establishing an efficient service delivery system necessitates addressing this array of interrelated components (Ullah et al., 2023). Technologies such as digital transformation can also enhance service delivery.

Digital transformation (DT) is the incorporation of technology advancements into an organization's business model to enhance value and performance (Chaanoun et al., 2022). Digital transformation is defined by the extensive dissemination of digital technology, which requires organizational change. Filgueiras et al. (2019) contend that digital transformation in government is a multifaceted process of institutional change, shaped by elements including managerial choices, technical accessibility, and overarching institutional settings. The transition from e-government to digital government involves the complete digitization of government services, which aims to optimize governance and administrative units and promote decentralization (Sang-Chul & Rakhmatullayev, 2019). According to Shibambu and Ngoepe (2024), a clear, integrated strategy and supportive legislative framework are crucial for successful digital transformation. Additionally, there is a need for adequate funding, training, and a shift in mindset among public servants to fully embrace and implement digital transformation, ultimately improving service delivery to citizens.

Digital transformation significantly impacts service delivery by enabling organizations to adopt malleable organizational designs and integrate digital business ecosystems. These changes facilitate continuous adaptation and innovation, leading to improved service quality and efficiency (Hanelt et al., 2021). Sang-Chul and Rakhmatullayev (2019) assert that digital transformation may optimize administrative processes, diminish bureaucratic delays, and enhance residents' quality of life. The primary objective of digital transformation is to augment public service delivery, optimize administrative procedures, and elevate the quality of life for residents via digital innovation (Chaanoun et al., 2022). Plekhanov et al. (2023) assert that digital transformation enables companies to proactively address evolving consumer needs and market trends via the adaptation and reconfiguration of organizational processes and the provision of goods and services.

In the healthcare sector, and particularly within public hospitals, service delivery takes on a critical role as it directly influences patient outcomes and overall public health. As per Usak et al. (2020), effective healthcare service delivery in public hospitals involves ensuring that medical services are accessible, affordable, and of high quality. This includes the provision of essential medical supplies, well-trained healthcare professionals, and efficient healthcare processes. Fatima et al. (2018) indicates that efficient service delivery in public hospitals ensures optimal utilization of resources, reduces patient wait times, and fosters trust in the healthcare system, ultimately leading to improved health outcomes for the community. Measurement of service delivery in healthcare includes patient outcomes, wait times, patient satisfaction, and adherence to clinical guidelines (Oleribe et al., 2019).

Kenya's health vision according to Gachie and Iravo (2019) is to offer all citizens equitable and cost-effective healthcare at the best possible level. This will require, among other things, reorganizing the country's health service delivery to place a greater emphasis on preventive and promotional healthcare. The Health Services Department is guided by Kiambu County's Strategic Plan, which is an expression of dedication and will to provide the public with better health services. The Kiambu County strategy plan for the next five years

describes the County's activities, the healthcare business, and other partners. The plan is built on the Kenya Health Policy 2030 in 2012, the Kenya Health Strategy and Investment: Vision 2030 Plan for the Years 2012–2017, and the Kiambu County Integrated Development Plan 2013.

Kiambu Level 5 Hospital is a tertiary public health facility in Kiambu town, Kiambu County. It is a 284-bed facility which offers various preventive, curative and rehabilitative medical services. The facility has various departments including medical, surgical, maternity, physiotherapy, occupational therapy, orthopaedic, pharmacy, records and procurement. The most common conditions attended to include upper respiratory tract infections, diarrhoea, urinary tract infections, eye infections/conditions, arthritis and diseases of the skin. The top 5 causes of mortality in the hospital include pneumonia, diarrhoea & gastroenteritis, diabetics, neonatal sepsis and jaundice, hypertension and meningitis. The average number of patients seen in the facility was 711 per days and 21,234 patients monthly (Kiambu Level 5 Hospital, 2024).

Statement of the Problem

Public hospitals face unique challenges such as budget constraints, high patient volumes, and often inadequate infrastructure. Kiambu Level 5 Hospital faced a number of service delivery difficulties which can be prevented through adoption of digital transformation, including lack of qualified personnel, inadequate medical infrastructure, inconsistent medical product supply, unreliable medical financing, and improper record-keeping, long turnaround times on admissions, discharges, emergency response which lead to mortalities (Republic of Kenya, 2023). Patients were still given patient cards and their data is still kept on file by the medical facility. This led to medical errors and made it more difficult for the government to have centralized health records, which would have helped them stop epidemics before they started or spread.

Several studies had been carried out on digital transformation. For instance, Bachir (2021) evaluated effects of customer relationship management on digital transformation of Poland banks. Impacts of business models on digital transformation in France were examined by Wattiez and Goy (2023). Quarfordt and Aadan (2021) evaluated how digital capabilities affected the digital transformation of several Swedish SMEs. Elsewhere, Oliver *et al.* (2023) evaluated impacts of continuous improvement on manufacturing companies' digital transformation in England. Evidently, most of existing research was carried out in the developed countries in Europe and North America. Additionally, studies in the healthcare industry were scarce and far between with most authors focus on banking and manufacturing. Therefore, this research aimed to assess effects of digital transformation on service delivery in healthcare sector. Specifically, the focus was on Kiambu Level 5 Hospital.

Objectives of the Study

The study was guided by the following objectives:

- To assess the effect of digital customer relationship on service delivery of Kiambu Level 5 Hospital.
- To examine the effect of digital capabilities growth on service delivery of Kiambu Level 5 Hospital.
- To establish the effect of continuous improvement on service delivery of Kiambu Level 5 Hospital.

LITERATURE REVIEW

Digital Transformation and Service Delivery

Research demonstrates that digital transformation profoundly impacts service delivery by enhancing efficiency, reducing costs, and improving customer experiences through the adoption of advanced technologies. Romero et al. (2019) describe digital servitization, commonly referred to as the "digital transformation of services," as bringing about new dynamics in service provider-customer interactions. The components of service delivery procedures are impacted by this phenomena.

New treatments and improved methods of health management are part of the digital transformation of healthcare, which also include developments associated with the internet and digital technology. Quality

management of the massive amount of data collected may improve patient well-being and save service costs (Stoumpos et al., 2023). Härkönen et al. (2024) did an umbrella review which found that although patient satisfaction was high, the impact of digital services on population health and costs was not entirely consistent. There has been little study on the usage of digital services and its relationship to workers' happiness, particularly in the healthcare industry.

The study by Koebe and Bohnet-Joschko (2023) revealed the requirements for a successful digital transition in the healthcare industry. Patients' altered perceptions of themselves proved to be the deciding factor in treatment quality, even if data interoperability is crucial for technical intensity. They illustrated the need for hospitals to use cutting-edge ICT, modify their business models to match patient expectations, and redefine their role in developing digitally driven ecosystems. However, managers may be undervaluing or disregarding the effects of digitalization on professional occupations and workplace changes, according to study by Kaihlanen et al. (2023). Managers are more likely to implement systems that undermine the efforts of experts, and the danger of ignoring possible harmful impacts grows as a result.

Customer Relationship and Service Delivery

Bachir (2021) evaluated effects of customer relationship management on digital transformation of Poland banks. Thirty bank customers and sixty bank workers participated in the study. For this investigation, quantitative data was acquired. SPSS was employed to analyze acquired data. Percentage distribution and frequency analysis were utilized to analyze data. Findings showed that bank's ability to retain customers is directly correlated with how satisfied those customers are, especially if there is a high level of customer loyalty. The study suggested giving consumers a fresh banking experience through the use of cutting-edge technologies. Prior study conducted in Poland utilized case study methodology. Thus, a recent study in Kenya was conducted and utilize descriptive methodology.

Gandhi (2022) examined effects of customer relationship management in Indian healthcare marketing on digital transformation. Secondary data analysis, including review procedures, was employed in the Customer Relationship Management Systems study. As part of the phase, the research reviewed close to twenty scholarly and significant research publications. Implementing digital transformation improved hospital customer relations and raises the overall quality of healthcare services. The aforementioned investigation was conducted in India and utilized secondary data. As a result, the current study was carried out in Kenya and make use of primary data.

Magatef *et al*. (2023) evaluated how Jordanian customers' loyalty was affected by electronic CRM tactics. The quantitative research approach was used in the investigation. 301 Jordanian internet buyers provided information via an online survey, which was then, analyzed using structural equation modeling. Since there was no population framework, non-probability (purposive) sampling was used. The findings demonstrated that while the personal component had a detrimental impact on consumer loyalty, the functional dimension had a large and favourable impact. The previous research used purposive sampling and was carried out in Jordan. This research used stratified random sampling and was performed in Kenya.

Capabilities Growth and Service Delivery

Quarfordt and Aadan (2021) evaluated how digital capabilities affected the digital transformation of several Swedish SMEs. An organized methodology was employed in the study to select and compile the sources for examination. Zoom was employed to perform the digital interviews. Six interviews in six distinct sectors were conducted to gather data for this thesis. To examine the data, a qualitative analysis was carried out. Findings demonstrated a link between effective renewal of strategy and digital dynamic capabilities. Results validated that digital dynamic capabilities are a process-model, requiring a linear approach to be developed or employed for strategic renewal. Qualitative analysis was applied to analyze data by previous study and was performed in Sweden while recent study utilized descriptive and inferential analysis and be done in Kenya.

Impacts of digital capabilities on digital transformation during COVID-19 pandemic in Indonesia were evaluated by Himanshee *et al*. (2023). The results showed that, throughout the pandemic, SMEs' digital transformation and innovation were significantly and favorably impacted by their digital capacity and orientation. Furthermore, the research verified that innovation and digital transformation have a favourable impact on SMEs' performance during the epidemic. While the most recent study was conducted in Kenya and concentrate on Kiambu Level 5 Hospital, the previously mentioned study was conducted in Indonesia and concentrated on SMEs.

Continuous Improvement and Service Delivery

Oliver et al. (2023) evaluated impacts of continuous improvement on manufacturing companies' digital transformation in England. A survey study design that is exploratory was used. There were four parts to the methods utilized to conduct the study. Methodology for digital transformation was created in phases one through four, the first three of which relied on a thorough theoretical literature assessment, while the fourth part required approaching specific organizations to confirm the methodology's suitability in an industrial context. The manufacturing companies' records from 2018 to 2022 were included for examination, spanning the previous five years. After a thorough examination of all the documents such as consumer complaints, management evaluations, and among other data, corrective and preventive measures were identified as well as 70 issues and opportunities that showed substantial impacts. An exploratory research design was employed by previous study which was done in England. Present study utilized descriptive research design and be done in Kenya.

Effect of continuous improvement on digital transformation of healthcare in Cyprus was evaluated by Stoumpos et al. (2023). Using the Scopus, Science Direct, and PubMed databases, a comprehensive bibliographic review covering the years 2008–2021 was carried out. August 2022 saw the completion of the search, which turned up 5847 papers, 321 of which met the requirements for inclusion in the process. To accomplish continuous improvement in medical healthcare and to enhance the delivery of healthcare, creative methods were proposed. Bibliographic review methodology was utilized by prior study which was done in Cyprus. However, recent study was done in Kenya and utilized descriptive methodology.

Resource-Based View Theory

Penrose (1959) proposed the notion of resource-based perspective. RBV, as described by Ambrosine and Bowman (2009), views a corporation as a combination of resources and competences that are distributed unevenly across the organisation as it continues to operate. According to this idea, organisations should strategically develop distinctive and widely distributed resources in order to establish a long-lasting competitive advantage. Miller (2019) asserts that a company's marketability is contingent upon its resources and capabilities. The underlying assumption is that every company has unique resources, which will remain exclusive for a significant duration. When a firm reaches a state of equilibrium, it means that its resources are evenly distributed and it becomes very lucrative (Greve, 2021).

During periods of market turmoil or substantial impact, the Resource-Based View (RBV) fails to provide guidance on identifying and using future resources, as well as refreshing, re-integrating, or reconfiguring existing resources (Assensoh-Kodua, 2019). To enhance firm performance, a corporation may undertake resource reorganisation and integration into its operations using the resource-based perspective. Moreover, enhancing customer relations in hospitals requires the restructuring of the hospital's particular systems, procedures, and capabilities via the adoption of digital transformation methods (Davis & DeWitt, 2021). The idea is relevant since the present research examines how the hospital's specific strengths and assets might be used to enhance digital transformation.

Identify, Differentiate, Interact and Customize Theory

The approach known as the Identify, Differentiate, Interact, and Customise model was created by Peppers and Rogers in 2001. The text emphasises four crucial measures that firms must do. The notion seeks to improve

the quality of the connection between the consumer and the service provider (Giannotti, 2021). The first step should be to identify the consumers. The subsequent phase is to get a thorough comprehension of the outlined goals (Peppers & Rogers, 2001). The firm is required to get the customer's name, address, and previous purchase records, along with other personal details. Given the potential impracticality of doing this at every interaction, the corporation must establish a system to facilitate effective information flow between its several divisions (Burke & Stets, 2022).

This thesis posits that organizations have to use digital infrastructure to identify, distinguish, interact with, and tailor the services they provide to consumers. This improves the company's capacity to retain consumers and cultivate loyalty (Peppers & Rogers, 2001). This theory is relevant to the current research as it elucidates the rationale behind hospitals using various technologies to identify, differentiate, and customize consumer needs to improve customer relationship management. This theory's principles inform an organization's strategic and infrastructural choices to achieve its aims. The notion is relevant to the study as it facilitates digital transformation and enhances digital customer connections.

Dynamic Capability Theory

The dynamic capacities theory, introduced by Teece and Pisano (1994), extends the RBV of the company (Samsudin & Ismail, 2019). Teece (1990) characterized a firm's dynamic capabilities as the capacity to proficiently build, integrate, and alter both internal and external resources and competencies to adeptly respond to and adjust to swiftly evolving business settings. The fundamental characteristic of both dynamic capabilities and resources/competences is that they are generally not available for purchase; rather, they must be cultivated. Companies that are capable of adjusting and evolving in sync with the business environment are those that possess distinct attributes such as sensing, seizing, and changing. The capacity to generate long-term profits relies on these specific kind of abilities (Teece, 2007). They enable the firm to effectively synchronise its skills, resources, and other assets.

Teece and Pissano (1994) argued that a firm's dynamic abilities are a result of its capacity to effectively organise its resources and operations within the context of global specialisation and co-specialization. In quickly developing markets, it is essential to possess the capability to restructure a company's asset composition and execute the necessary internal and external changes (Salvato & Vassolo, 2018). Businesses should develop protocols to find high-impact enhancements with little expenses, since implementing changes may be costly. An individual's ability to adapt is dependent on their ability to analyse their environment, evaluate markets, and implement changes and transformations quickly enough to maintain a competitive advantage. It also illustrates the company's meticulous efforts in developing and defining the market to create and realize profit. To sustain robust alignment and attain a competitive advantage, it is often essential to expand, alter, or, if need, entirely overhaul the organization's operations (Teece, 2007). Thus, the idea endorsed the expansion of digital capabilities.

Conceptual Framework

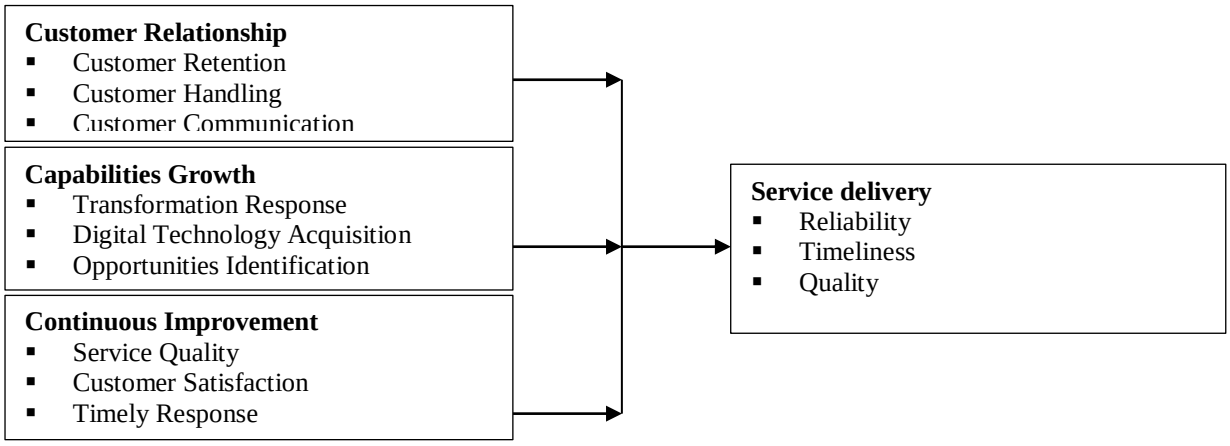

Figure 1: Conceptual Framework

METHODOLOGY

A descriptive research design was employed in this study. The study was carried out in Kiambu County. The study targeted the top management and medical personnel of Kiambu level 5 hospital. This is because these persons were involved in the digital transformation of the facility and had an experience with digital tools making them resourceful persons to interview about the subject. Therefore, target population of the study comprised 282 persons.

A sample was calculated for the research using Slovin's formula.

$n = N / (1 + N e^2)$ (Tejada & Punzalan, 2012).

$n=282/(1+282*0.05^2) =165.39$.

The research thus included a sample of 165 respondents. Stratified random sampling was used to guarantee representation of each profession in the final sample. The data for this research was gathered using a questionnaire and an interview schedule.

A preliminary study was undertaken to assess the feasibility of the questionnaire prior to data collection. The pilot research was performed in Thika Level 5 Hospital, a similar healthcare institution situated in Kiambu County. A pilot study was performed with 17 participants, constituting 10% of the research population. The data collected during the pilot phase was sorted, cleaned, and entered into a computer system using the Statistical Package for the Social Sciences (SPSS).

The internal consistency was measured using Cronbach's Alpha coefficient. Content analysis was used for the examination of qualitative data, while descriptive statistics and regression analysis were employed for the quantitative data. Means, standard deviations, and frequencies were used in descriptive statistics. Data on digital transformation, service delivery, and demographics were all aided by descriptive statistics. The study used multiple regression analysis to compare how digital transformation affected service delivery. The outcomes of the descriptive and regression analyses were shown in tabular format.

DATA ANALYSIS, PRESENTATION AND DISCUSSION

Response Rate

Questionnaires were distributed to 165 respondents. Table 1 outlines the response rate in the study.

Table 1: Response Rate

Categories	Sample	Respondents	Response Rate
Medical Officers	22	16	72.7
Nurses	114	109	95.6
Radiologists	5	4	80.0
Physiotherapists	4	3	75.0
Administration	4	3	75.0
Laboratory technologists	9	8	88.9
Pharmacists	8	7	87.5
Total	165	150	90.9

The findings indicate that the research had a response rate of 90.9%. The response rate is considered sufficiently high to warrant the generalization of this study's findings to other healthcare institutions. The response rate exceeds 70%, which is the suggested threshold for descriptive surveys (Kothari, 2017; Saleh & Bista, 2017). The high response rate means the sample more accurately reflects the population, reducing sampling bias and increasing the generalizability of the findings. In addition, data collected is likely to be more comprehensive and provide a clearer picture of digital transformation and service delivery which enhances the study's internal and external validity.

Descriptive Analysis of Quantitative Data

This section presents the results of descriptive analysis of the variables in the study.

Customer Relationship

The researcher sought to describe digital customer relationship in Kiambu Level 5 Hospital in Kenya. Data was collected on customer retention, customer handling and customer communication in Likert scale form. The data was then subjected to descriptive analysis using mean and standard deviation. The results are summarised in Table 2.

Table 2: Descriptive Analysis of Customer Relationship

	N	Min	Max	Mean	Std Dev
Customer retention is an essential measure of digital customer relation	150	3	5	4.77	0.484
Using technology enables handling of customers more efficiently than using traditional mean in the hospital	150	2	5	4.46	0.692
Digital communication fosters good customer experience that traditional methods	150	3	5	4.66	0.529

There was a high agreement among the respondents that customer retention is an essential measure of digital customer relation (4.77±0.484), communication fosters good customer experience that traditional methods (4.66±0.529) and that using technology enables handling of customers more efficiently than using traditional mean in the hospital (4.46±0.692). The mean and standard deviation values were in the acceptable range as per Andrade et al. (2020). These responses demonstrate a high agreement among respondents with the items in Table 3. This indicates that digital customer relationship was implemented to a large extent at Kiambu Level 5 Hospital in Kenya.

During an interview, respondents were asked to rate how extensively the hospital had adopted digital tools for patient communication and engagement. A content analysis showed that the hospital had implemented various digital tools, including electronic health records, patient portals, mobile health apps, telemedicine services, and automated communication systems, which have markedly enhanced patient communication and engagement. The shift from paper-based to electronic health records was a significant aspect of the hospital's digital transformation. Respondents noted that the EHR system has enabled more efficient and precise storage and retrieval of patient information, thereby improving service delivery by minimizing errors and enhancing access to medical histories. The introduction of patient portals, enabling patients to view their medical records, book appointments, and interact with healthcare providers, was also highlighted. This tool has fostered better patient engagement by facilitating more immediate and effective communication with healthcare providers, leading to increased satisfaction and more tailored care. Some of the responses are captured below:

"We have transitioned from paper-based records to electronic health records, which allow for efficient and accurate storage and retrieval of patient information."

"We have put in place EMR, automated visit reminders, website for self-booking of appointment, social media platforms I.e Facebook, Instagram, WhatsApp and x, cashless payments."

The development of mobile health applications was highlighted as an innovative tool to empower patients in managing their health. These applications provide patients with reminders for medication, updates on appointments, and self-monitoring tools, which have improved patient adherence to treatment plans and contributed to more effective healthcare delivery. To keep patients' access to healthcare intact, the growth of telemedicine services has been essential, especially during the COVID-19 epidemic. The adoption of remote consultations has minimized the need for physical visits, reducing congestion in outpatient departments and improving the overall efficiency of service delivery. One of the responses is captured below:

"To a greater extent with room for improvement. The hospital uses telemedicine where Patients access digital consultations, monitoring and prescription."

Automated systems, such as SMS and email notifications for appointment reminders and follow-up care, emerged as another significant theme. These systems have streamlined communication between the hospital and its patients, helping to reduce missed appointments and improve the management of follow-up care. This automated approach has also supported the hospital in gathering patient feedback, leading to continuous improvements in service quality. The implementation of cashless payment systems was mentioned as a step toward modernizing financial transactions within the hospital. This has not only enhanced the efficiency of service delivery but also improved transparency and accountability in payment processing. The hospital's use of social media platforms was highlighted as a way to engage patients and disseminate health information. One of the responses is captured below:

"We have put in place EMR, automated visit reminders, website for self-booking of appointment, social media platforms I.e Facebook, Instagram, WhatsApp and x, cashless payments."

The overall impact of digital tools on patient engagement and service efficiency was consistently noted by respondents. The adoption of EHR, patient portals, and automated systems has led to a reduction in wait times, improved communication, and more streamlined service delivery, contributing to enhanced patient satisfaction. Despite the adoption of several digital tools, the hospital still relies on manual systems for certain aspects of patient engagement, particularly in outpatient services. The continued use of SMS reminders and health talks through TVs indicates that while progress has been made, there are areas where digital transformation has yet to be fully realized. One of the responses is captured below:

"Overall, the implementation of these digital tools has significantly improved patient engagement, reduced wait times, and enhanced the overall efficiency of service delivery at the hospital."

Capabilities Growth

The researcher collected data on capabilities growth which included transformation response, digital technology acquisition and opportunities identification. The data was then analysed using mean and standard deviation and results outlined in Table 3.

Table 3: Descriptive Analysis of Capabilities Growth

	N	Min	Max	Mean	Std Dev
Acquisition of digital technology improves productivity of the hospital	150	1	5	3.12	1.209
Opportunities identification is an essential measure of digital capabilities growth	150	1	5	3.39	1.074
Transformation response using digital technology is vital during analysis of data records	150	3	5	4.57	0.660

There was a high agreement among the respondents that transformation response using digital technology is vital during analysis of data records (4.57 ± 0.660). The respondents were somewhat in agreement that identifying opportunities is a crucial metric for digital skills advancement (3.39 ± 1.074) and that acquisition of digital technology improves productivity of the hospital (3.12 ± 1.209). The mean and standard deviation values were in the acceptable range as per Andrade et al. (2020). This means capabilities growth at Kiambu Level 5 Hospital was implemented to a large extent but lower to that of digital customer relationship.

The researcher had the objective of ascertaining from the respondents the extent to which Kiambu Level 5 Hospital has invested in the development of its capabilities. Content analysis of responses revealed that the hospital had made substantial investments in developing its digital capabilities, focusing on transitioning to electronic health records, upgrading IT infrastructure, enhancing staff competencies, implementing cybersecurity measures, and introducing telemedicine services. The shift from paper-based to electronic health

records was a recurrent topic in the answers. This shift represented a foundational step in the hospital's digital transformation, allowing for more efficient data management, quicker retrieval of patient information, and improved accuracy in record-keeping. The hospital had allocated significant resources toward upgrading its IT infrastructure. This included purchasing computers, upgrading server capabilities, and ensuring high-speed internet connectivity throughout the facility. These expenditures were required to enable the hospital to maintain its expanding digital operations and raise the standard of healthcare services offered by supporting the installation of digital technologies including EHR, telemedicine, and patient portals. Some of the responses are captured below.

"The hospital has allocated resources to transition from paper-based systems to electronic health records."

"Introduction of telemedicine, moving from manual health records to online."

"Significant investments have been made in upgrading the hospital's IT infrastructure."

Continuous infrastructure upgrades were another significant theme. Respondents pointed out that the hospital consistently invested in updating its technological capabilities, ensuring that its digital systems remained efficient and functional. This proactive approach included upgrading hardware, software, and network capabilities, which were necessary to accommodate the increasing demand for digital services within the hospital. The introduction of telemedicine emerged as a prominent theme, reflecting the hospital's efforts to extend healthcare services beyond traditional in-person visits. In order to alleviate travel concerns, the hospital enabled virtual consultations. This was particularly helpful during the COVID-19 epidemic. Some of the responses are captured below.

"Significant investments have been made in upgrading the hospital's IT infrastructure."

"Staff training and development"

The hospital's focus on staff development and training was another important topic. The use of new technology like electronic medical records and telemedicine necessitated training for hospital personnel on their efficient usage. The hospital invested in continuous education programs to ensure that healthcare providers could adapt to digital changes and optimize the benefits of the digital tools implemented, ultimately improving service delivery. The hospital also prioritized cybersecurity and data protection throughout the shift to digital health systems. The hospital adopted comprehensive cyber security policies, including secure servers and data encryption, to defend against possible breaches, as respondents underscored the significance of preserving patient information.

"Staff training and development"

"Through training of facility staff, purchase of computers for EMR"

Continuous Improvement

Continuous improvement at Kiambu Level 5 Hospital was assessed by collecting data on service quality, customer satisfaction and timely response. Table 4 presents a summary of the results of descriptive analysis of the data.

Table 4: Descriptive Analysis of Continuous Improvement

	N	Min	Max	Mean	Std Dev
The service quality of the hospital is very good due to use of digital technology	150	1	5	**3.09**	**1.175**
Customer satisfaction is ensured during the utilization of digital technologies	145	3	5	4.54	0.612
Technology enables timely response of staff which promotes good customer experience	150	1	5	3.25	1.249

There was high agreement among respondents that customer satisfaction was ensured during the utilization of digital technologies (4.54+0.612). There was also agreement that technology enabled timely response of staff which promotes good customer experience (3.25±1.249). However, there was some disagreement as to whether the service quality of the hospital was very good due to use of digital technology (3.09+1.175). The mean and standard deviation values were in the acceptable range as per Andrade et al. (2020). This demonstrates a moderate agreement with the items in Table 4 which demonstrates that continuous improvement at Kiambu Level 5 Hospital was implemented to a moderate extent.

In the interview the researcher probed whether Kiambu Level 5 Hospital had formal process for continuously monitoring and evaluating its service delivery processes. Responses revealed that that the hospital had a robust and formalized process for monitoring and evaluating its service delivery. This process involved regular audits, performance reviews, patient feedback systems, and quality improvement projects. The most prominent theme was the presence of a formal monitoring and evaluation system at the hospital. Respondents consistently mentioned structured programs that evaluate service delivery processes. These programs involved systematic reviews and assessments of various operational and clinical areas, reflecting a commitment to maintaining high standards of care. This formal approach ensured that the hospital remained aligned with its objectives of continuous improvement. The conduct of regular internal audits emerged as a recurring theme. The hospital employed these audits to assess operational efficiency and clinical practices, helping to identify areas for improvement. Audits were described as a key tool in maintaining service quality, with a focus on ensuring compliance with established standards and protocols. One of the responses are captured below:

"Yes, Kiambu Level 5 Hospital has a formal process for continuously monitoring and evaluating its service delivery processes, which includes regular audits, patient feedback systems, and performance reviews to ensure ongoing improvements and high-quality care."

Patient feedback systems were also highlighted as an essential component of the hospital's monitoring efforts. Through structured methods of collecting feedback from patients, the hospital sought to gauge patient satisfaction and identify areas for enhancement. This patient-centered approach allowed the hospital to remain responsive to the needs and concerns of its service users, thus contributing to improved patient outcomes. The use of performance reviews and peer assessments was a theme emphasized by respondents. Regular reviews of staff performance and peer-led assessments were implemented to evaluate the quality of care provided by healthcare workers. This practice not only helped in identifying individual areas for improvement but also fostered a culture of accountability and continuous professional development among staff. One of the responses are captured below:

"Collecting feedback from patients"

Another key theme was the use of Quality Improvement (QI) projects. These initiatives focused on identifying specific areas of service delivery that needed enhancement and implementing targeted projects to address these areas. The QI projects were data-driven and aligned with the hospital's goal of improving patient outcomes, operational efficiency, and the overall quality of care. Data-driven decision-making emerged as an important theme in the hospital's continuous improvement efforts. Respondents mentioned the use of data reviews as a core component of the evaluation process. Lastly, a strong focus on clinical practices and patient outcomes was evident in the responses. The hospital's monitoring processes included regular reviews of clinical practices to ensure they met established standards and delivered positive patient outcomes. Some of the responses are captured below:

"Internal audits and peer reviews."

"Yes, through data reviews, QI projects"

Service Delivery

The study also investigated the service delivery at Kiambu Level 5 Hospital. This was done by collecting data on the reliability, timeliness and quality of services rendered. The data was then subjected to descriptive analysis using mean and standard deviation. The results are summarised in Table 5.

Table 5: Descriptive Analysis Service Delivery

	N	Min	Max	Mean	Std Dev
The quality of patient care in this hospital is very high because of digital technology	150	3	5	4.45	0.661
Using digital technology, health services in this hospital are delivered on time	150	1	5	3.48	1.001
Health services in this hospital are reliable because of digital technology	150	2	5	4.46	0.672
Health services in this hospital are customer-friendly because of digital technology	150	3	5	4.46	0.598
Digital technology has enabled satisfaction with services in this hospital	150	3	5	4.71	0.468

There was a high agreement that digital technology had enabled satisfaction with services in the hospital (4.71±0.468), health services in the hospital were reliable because of digital technology (4.46±0.672) and health services in the hospital were customer-friendly because of digital technology (4.46±0.598). There was also broad consensus that the hospital's usage of digital technology contributed to the extremely high caliber of patient care. (4.45+0.661). In addition, there was moderate agreement that using digital technology, health services in the hospital were delivered on time (3.48±1.001) The mean and standard deviation values were in the acceptable range as per Andrade et al. (2020). The responses indicate a high agreement with the items in Table 5. This means that service quality in the facility was very high.

The investigator was to investigate the effects of the hospital's digital transformation activities on the general effectiveness and caliber of patient care. The hospital's healthcare service has reportedly benefited from the digital transformation efforts in a number of areas. These initiatives reduced wait times, improved the accuracy of patient records, and enhanced communication and compliance with healthcare protocols. One of the most recurring themes was the improvement in the efficiency of service delivery, particularly in relation to reduced patient wait times. Respondents consistently highlighted that the implementation of digital systems allowed for quicker service provision, which directly impacted patient satisfaction. The reduced waiting times were attributed to automated processes that streamlined patient flow, minimizing delays in care. Another frequently cited theme was the improvement in the accuracy of patient records due to the adoption of digital tools. Respondents noted that digital systems reduced errors associated with manual record-keeping, resulting in more precise data management. As a result, patients received better diagnoses, prompt interventions, and customized treatment regimens, all of which improved patient outcomes. Some of the responses are shown below:

"The digital systems ensure quick services hence better delivery of healthcare at the hospital "

"It has enhanced patient care which has helped in accurate and timely diagnosis, personalized treatment plans leading to improved patient outcome."

The theme of improved communication was also prominent. Respondents pointed out that digital transformation had enhanced communication both among healthcare staff and between healthcare providers and patients. The digital systems facilitated easier and more efficient information sharing, which was crucial for ensuring better-coordinated care and more effective patient-provider interactions. Automation of administrative functions, such as scheduling, billing, and record-keeping, was another important theme that emerged. Respondents highlighted that the automation of these tasks not only reduced manual errors but also freed up healthcare staff to focus more on direct patient care. This shift allowed for more attention to be

dedicated to the clinical aspects of care, improving service quality and efficiency. One of the responses is shown below:

"It has improved communication "

The theme of personalized patient care was also widely discussed. Digital transformation enabled more accurate and timely diagnoses, which led to personalized treatment plans tailored to individual patients' needs. Respondents emphasized that this had a direct impact on patient outcomes, with many noting that digital tools contributed to better healthcare results overall. Several respondents pointed out that digital initiatives had significantly improved access to healthcare services. Patients were able to interact with healthcare services remotely, view medical information, and make appointments via the use of patient portals, smartphone applications, and other digital technologies. This widened access to treatment by improving patient convenience and lowering the necessity for in-person appointments. One of the responses is shown below:

"It has enhanced patient care which has helped in accurate and timely diagnosis, personalized treatment plans leading to improved patient outcome."

Respondents mentioned that digital tools enhanced compliance with existing healthcare policies and protocols. Digital systems made it easier to ensure that staff followed established procedures, which in turn improved the consistency and quality of care delivered to patients. This compliance contributed to a more structured and standardized approach to healthcare delivery. Another theme that emerged was the efficiency with which patient information could be retrieved using digital systems. Respondents indicated that the implementation of digital records greatly improved the speed and ease of accessing patient data, which was critical for timely decision-making in patient care. This high efficiency in information retrieval further contributed to the hospital's ability to provide better and more responsive healthcare services. Some of the responses are shown below:

"Automation if administrative tasks such as scheduling, billing, record keeping has reduced manual errors and frees up staff to focus more on patient care"

"High efficiency in patients information retrieval"

Respondents were asked to share specific examples of how digital tools have improved the patient experience. Digital tools were found to significantly enhance the patient experience by reducing waiting times, increasing access to health information, improving communication, and facilitating advanced treatment methods. Better results and more patient satisfaction may be attained by patients managing their healthcare more successfully thanks to the ease provided by technology like patient portals, smartphone applications, and telemedicine. A prominent theme was the significant reduction in waiting times for patients. Respondents consistently pointed out that digital tools streamlined processes, making service delivery more efficient. Respondents highlighted the convenience of patient portals and mobile applications as key innovations. Patients could make appointments, see their medical information, and handle their relationships with healthcare providers from a distance thanks to these digital platforms. The improved communication between patients and healthcare professionals was another significant benefit. Some of the responses are shown below:

"The patient portals and mobile apps have allowed patients to access their medical records, appointment scheduling from anywhere, reducing the need for in person visits or phone calls."

"Reduced waiting time, access to information through social media handles, convenience of booking for appointments, easy access to health records, convenience during settling of bills."

"Less patient waiting time, quality services, reduced cases of loss of records, Telemedicine, advanced treatment methods."

"Improved patient outcome, better communication like online monitoring and prescription."

The study's participants were also asked to list the biggest obstacles Kiambu Level 5 Hospital has to overcome in order to undergo a digital transformation, especially with regard to service delivery. The content analysis of respondents' comments about the obstacles to patient adaptation, such as staffing shortages, technological glitches, and resource constraints. A recurring theme was the inadequacy of financial resources. Respondents frequently mentioned that the high cost of implementing and maintaining both hardware and software posed a significant challenge. In addition to financial challenges, respondents emphasized the strain caused by inadequate IT infrastructure and frequent system downtimes. Software glitches and outages disrupted service delivery, hampered business continuity, and affected the overall efficiency of healthcare services. Another key issue was the lack of adequately trained personnel. Respondents noted that many staff members were not sufficiently trained or comfortable using new digital tools, which created inefficiencies in service delivery. Some of the responses are shown below:

"Inadequate resources, corruption, inadequate training"

"The cost of software and hardware has been a challenge"

"Frequent system downtimes and software glitches can disrupt service delivery."

"Limited financial capability, lack of skilled personnel to drive the agenda, low uptake by patients,"

"Inadequate trained staff, inadequate IT infrastructure, inadequate budget allocations for EMR"

Inferential Statistics

Correlation and regression analysis were used to evaluate the impact of digital transformation on service delivery at Kiambu Level 5 Hospital in Kenya. This section contains the outcomes.

Correlation Analysis

Correlation analysis was conducted between digital transformation and service delivery. This was done by correlating scores of digital customer relationship, digital capabilities growth and continuous improvement with scores of service delivery.

Table 6: Correlation Analysis

		Customer Relationship	Capabilities Growth	Continuous Improvement	Service Delivery
Customer Relationship	Pearson Correlation	1	.796**	.738**	.760**
	Sig. (2-tailed)		.000	.000	.000
	N	150	150	150	150
Capabilities Growth	Pearson Correlation	.796**	1	.858**	.707**
	Sig. (2-tailed)	.000		.000	.000
	N	150	150	150	150
Continuous Improvement	Pearson Correlation	.738**	.858**	1	.770**
	Sig. (2-tailed)	.000	.000		.000
	N	150	150	150	150
Service Delivery	Pearson Correlation	.760**	.707**	.770**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	150	150	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

A significant positive correlation ($r(148)=.760$, $p<.001$) was found between digital customer relationship and service delivery. A significant positive correlation ($r(148)=.707$, $p<.001$) was observed between digital capabilities growth and service delivery. Continuous improvement was also significantly positively correlated ($r(148)=.770$, $p<.001$) with service delivery. The correlation analysis reveals that all three digital

transformation variables—digital customer relationship, digital capabilities growth, and continuous improvement—are positively and significantly associated with service delivery. The strongest relationship was observed between continuous improvement and service delivery, indicating that as continuous improvement efforts increase, service delivery tends to improve significantly.

Regression Analysis

Regression analysis was also conducted. Similar to correlation analysis, scores of digital customer relationship, digital capabilities growth and continuous improvement were regressed with scores of service delivery. Table 7 shows the model summary of the regression output.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.822[a]	.676	.669	1.41114

a. Predictors: (Constant), Continuous_Improvement, Customer_Relationship, Capabilities_Growth

The high R value of .822 indicates a strong relationship between the combined digital transformation factors and service delivery. The modified R^2 value of 0.669 indicates that, after accounting for the number of predictors in the model, about 66.9% of the variation in service delivery is explained by the three digital transformation factors. The model summary indicates that digital customer relationship, digital capabilities enhancement, and continuous improvement together have a considerable and significant influence on service delivery inside the hospital.

An analysis of variance (ANOVA) was performed to ascertain the significance of the regression model in predicting service delivery based on the predictors of digital customer connection, digital capabilities expansion, and continuous improvement. The results are shown in Table 8.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	606.602	3	202.201	101.541	.000[b]
	Residual	290.732	146	1.991		
	Total	897.333	149			

a. Dependent Variable: Service_Delivery

b. Predictors: (Constant), Continuous_Improvement, Customer_Relationship, Capabilities_Growth

The ANOVA results were significant, $F(3,146)=101.541$, $p<.001$. The ANOVA findings demonstrate that the whole regression model is statistically significant, indicating that the interplay of digital customer connection, digital capabilities enhancement, and continual improvement substantially forecasts service delivery. This also means that at least one of the digital transformation indicators is significant.

Table 9 presents the coefficient table which provides key information about the relationship between predictor variables (digital customer relationship, digital capabilities growth, and continuous improvement) and the response variable (service delivery).

Table 9: Table of Coefficients

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.856	1.365		1.359	.176
	Customer Relationship	.497	.085	.461	5.822	.000
	Capabilities Growth	.092	.088	.109	1.050	.295
	Continuous Improvement	.327	.058	.524	5.613	.000

a. Dependent Variable: Service_Delivery

The coefficient table reveals that digital customer relationship ($p<.001$) and continuous improvement ($p<.001$) were significant. The unstandardized coefficients shown in the table may be used to resolve the study's model as demonstrated below:

$Y = 1.856 + 0.497\ X_1 + 0.092\ X_2 + 0.327\ X_3 + \epsilon$

Where: Y= Service delivery , X_1= Digital Capabilities Growth, X_2= Continuous Improvement, X_3= Digital Transformation and ε = Error term

The constant (intercept) value of 1.856 suggests that when all predictor variables are zero, the baseline level of service delivery is 1.856. However, since the p-value is not significant (p=.176), this intercept is not statistically meaningful. The better coefficients for the three variables show that a unit change in digital customer relationship, digital capabilities growth, and continuous improvement would result in a 0.497, 0.092 and 0.327 increase in service delivery. The standardized coefficients indicate that continuous improvement and customer relationship are the strongest predictors of service delivery among the three variables. The results therefore show that while both digital customer relationship and continuous improvement significantly contribute to improved service delivery, continuous improvement has the greatest impact. Digital capabilities growth, on the other hand, does not significantly predict service delivery in this model. However, participants in the interview schedule valued digital capabilities growth and indicated that it influenced service delivery in a positive way.

Discussion

Effect of Customer Relationship on Service Delivery

The research aimed to examine the impact of customer relationships on the service delivery of Kiambu Level 5 Hospital. Quantitative data indicated that digital customer relationship management was extensively applied at Kiambu Level 5 Hospital in Kenya. The qualitative data included electronic health records, patient portals, mobile health apps, telemedicine services, and automated communication systems, which have markedly enhanced patient contact and participation. A significant positive correlation ($r(148)=.760$, $p<.001$) was found between digital customer relationship and service delivery. The regression analysis further examined the effect of digital customer relationship on service delivery within a model that also included digital capabilities growth and continuous improvement. The digital customer relationship was also significant ($p<.001$) in the regression analysis. The findings indicate that a unit change in digital customer connection would provide a 0.497 boost in service delivery. The findings demonstrate that enhancements in digital customer interactions are significantly linked to improved service delivery outcomes in the hospital.

This outcome aligns with previous research that identified a substantial correlation between customer relationships and service delivery. Bachir (2021) found that a bank's capacity to retain clients is closely linked to customer satisfaction, particularly when customer loyalty is high. Similarly, Gandhi (2022) showed that implementing digital transformation improves hospital customer relations and raises the overall quality of healthcare services. In agreement, Magatef et al. (2023) demonstrated that while the personal component had a

detrimental impact on consumer loyalty, the functional dimension had a large and favourable impact. Elsewhere, customer experience and customer satisfaction directly benefited from customer relationship management, according to study findings of Suharto and Yuliansyah (2023). The significant positive effect of digital customer relationship on service delivery underscores the value of digital tools in enhancing healthcare services. By investing in and optimizing these tools, hospitals can improve patient engagement, streamline service processes, and ultimately provide higher-quality care.

Effect of Capabilities Growth on Service Delivery

The study examined the effect of digital capabilities growth on service delivery of Kiambu Level 5 Hospital. Capabilities growth at Kiambu Level 5 Hospital was found to be implemented to a large extent but lower to that of digital customer relationship. the hospital had made substantial investments in developing its digital capabilities, focusing on transitioning to electronic health records, upgrading IT infrastructure, enhancing staff competencies, implementing cybersecurity measures, and introducing telemedicine services. A significant positive correlation ($r(148)=.707$, $p<.001$) was observed between digital capabilities growth and service delivery. However, digital capabilities growth was found to be not significant ($p=0.295$) in regression analysis. This result differs with the findings of Himanshee et al. (2023) where SMEs' digital transformation and innovation were significantly and favourably impacted by their digital capacity and orientation. It also contrasts with the results of Slavkovic et al. (2023), which indicate that digital skills substantially enhanced information and data literacy, information security management, and change management. While a strong correlation between digital capabilities growth and service delivery was observed, the lack of significance in the regression analysis suggests that digital capabilities growth alone may not directly influence service delivery outcomes when other factors are considered.

Effect of Continuous Improvement on Service Delivery

The research aimed to determine the impact of continuous improvement on the service delivery of Kiambu Level 5 Hospital. Continuous improvement at Kiambu Level 5 Hospital was implemented to a moderate extent. Responses in the interview revealed that that the hospital had a robust and formalized process for monitoring and evaluating its service delivery. Continuous improvement was significantly positively correlated ($r(148)=.770$, $p<.001$) with service delivery. Continuous improvement was also significant ($p<.001$) in the regression analysis whereby a unit change would lead to 0.327 change is service delivery. The significant positive correlation and the significant effect in the regression model both underscore that continuous improvement is strongly associated with and contributes to better service delivery outcomes. This result aligns with other research, including those by Patil and Rashidi (2023), Stoumpos et al. (2023), and Oliver et al. (2023), which identified continuous improvement as a significant factor in performance and service delivery outcomes. The notable positive association and considerable impact of continuous improvement on service delivery underscore the essential need of persistent enhancement initiatives. By emphasizing continuous improvement, healthcare businesses may attain superior service delivery results, augment operational efficiency, and elevate patient happiness.

CONCLUSIONS AND RECOMMENDATIONS

The customer relationship substantially and positively influenced the service delivery at Kiambu Level 5 Hospital. The research revealed that Kiambu Level 5 Hospital has used many digital technologies, including electronic health records, patient portals, mobile health apps, telemedicine services, and automated communication systems. This significantly improved patient communication and engagement which had enhanced the efficiency of service delivery by reducing wait times, improving communication and provided patients with more convenient access to healthcare services.

The effect of capabilities growth on service delivery of Kiambu Level 5 Hospital was positive but not significant. Although Kiambu Level 5 Hospital had made substantial investments in developing its digital capabilities, through upgrading IT infrastructure, enhancing staff competencies, implementing cybersecurity

measures, and introducing telemedicine services, this did not directly affect service delivery. According to the results, improved service delivery was achieved through a combination of digital capabilities growth, digital customer relationship and continuous improvement

Continuous improvement had a significant and positive effect on service delivery of Kiambu Level 5 Hospital. The study found that Kiambu Level 5 Hospital had a robust and formalized process for monitoring and evaluating its service delivery. This process involved regular audits, performance reviews, patient feedback systems, and quality improvement projects which resulted in continuous improvement and the provision of high-quality care.

Kiambu Level 5 Hospital should seek to retain existing customers through implementation of digital technologies. Utilizing digital communication tools can make patients feel valued and engaged, fostering loyalty to the hospital. In addition, implementing digital feedback mechanisms, such as online surveys or satisfaction ratings may enable the facility gather insights into patient experiences which if acted upon improves customer satisfaction and therefore loyalty and retention.

Kiambu Level 5 Hospital should also invest in acquisition of digital technology to improve productivity of the hospital. Implementing workflow automation tools can streamline various administrative processes, such as billing, claims processing, and patient registration. In addition, utilizing data analytics tools can help hospitals monitor key performance indicators.

There is a need to invest to invest in technology that ensures that health services are delivered on time. Technologies that monitor and manage patient flow can help hospitals identify and address delays in real-time. Advanced scheduling software for instance, can optimize appointment bookings, reduce no-show rates, and ensure that patients are seen in a timely manner.

Suggested Areas for Further Study

A comparable research should be conducted at other level 5 institutions for comparison analysis. Future research should include patients to get their perspectives, particularly about service delivery. Future research should investigate other data gathering techniques, such as observation.

REFERENCES

Andrade, C. (2020). Mean difference, standardized mean difference (SMD), and their use in meta-analysis: as simple as it gets. *The Journal of clinical psychiatry*, *81*(5), 11349.

Assensoh-Kodua, A. (2019). The resource-based view: A tool of key competency for competitive advantage. *Problems and Perspectives in Management*, *17*(3), 143.

Bachir, S. (2021). The evolution of customer relationship management in the digital age and its impact on banks. *The EUrASEANs: Journal on Global Socio-Economic Dynamics*, (3(28), 50-63.

Burke, P. J., & Stets, J. E. (2022). *Identity theory: Revised and expanded*. Oxford University Press.

Chaanoun, J., Rahmouni, A., & Alaoui, M. (2022). Literature review on organizational change and digital transformation. *International Journal on Optimization and Applications*, *2*(3), 14-22.

Davis, G. F., & DeWitt, T. (2021). Organization theory and the resource-based view of the firm: The great divide. *Journal of Management*, *47*(7), 1684-1697.

Fatima, T., Malik, S. A., & Shabbir, A. (2018). Hospital healthcare service quality, patient satisfaction and loyalty: An investigation in context of private healthcare systems. *International journal of quality & Reliability Management*, *35*(6), 1195-1214.

Filgueiras, F., Flávio, C., & Palotti, P. (2019). Digital transformation and public service delivery in Brazil. *Latin American Policy*, *10*(2), 195-219.

Gachie, M., & Iravo, M. (2018). Determinants of Health Care Service Delivery as a Devolved Function in Level Four Hospitals in Kiambu County, Kenya. *Strategic Journal of Business and Change management*, 3(4).

Gandhi, P. (2022). A new era in healthcare marketing through digital transformation and CRM. *International Journal of Health Sciences*,6(S1), 13300–13310.

Giannotti, J. (2021). The identity theory of powers revised. *Erkenntnis*, *86*(3), 603-621.

Greve, H. R. (2021). The resource-based view and learning theory: Overlaps, differences, and a shared future. *Journal of Management*, *47*(7), 1720-1733.

Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of management studies*, *58*(5), 1159-1197.

Härkönen, H., Lakoma, S., Verho, A., Torkki, P., Leskelä, R. L., Pennanen, P., ... & Jansson, M. (2024). Impact of digital services on healthcare and social welfare: An umbrella review. *International Journal of Nursing Studies*, *152*, 104692.

Kaihlanen, A. M., Laukka, E., Nadav, J., Närvänen, J., Saukkonen, P., Koivisto, J., & Heponiemi, T. (2023). The effects of digitalisation on health and social care work: a qualitative descriptive study of the perceptions of professionals and managers. *BMC Health Services Research*, *23*(1), 714.

Kaihlanen, A. M., Laukka, E., Nadav, J., Närvänen, J., Saukkonen, P., Koivisto, J., & Heponiemi, T. (2023). The effects of digitalisation on health and social care work: a qualitative descriptive study of the perceptions of professionals and managers. *BMC Health Services Research*, *23*(1), 714.

Koebe, P., & Bohnet-Joschko, S. (2023). The impact of digital transformation on inpatient care: mixed methods study. *JMIR Public Health and Surveillance*, *9*(1), e40622.

Koebe, P., & Bohnet-Joschko, S. (2023). The Impact of Digital Transformation on Inpatient Care: Mixed Methods Study. *JMIR public health and surveillance*, *9*, e40622. https://doi.org/10.2196/40622

Kothari, C. R. (2011). Research methodology: Methods and techniques (2nd ed.). Age International Press Limited

Kothari, C. R. (2017*). Research Methodology Methods and Techniques (2nd ed.)*. New Age International.

Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital transformation: An overview of the current state of the art of research. *Sage Open*, *11*(3), 21582440211047576.

Magatef, S., Al-Okaily, M., Ashour, L., & Abuhussein, T. (2023). The impact of electronic customer relationship management strategies on customer loyalty: A mediated model. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(4), 100149.

Miller, D. (2019). The resource-based view of the firm. In *Oxford research Encyclopedia of business and management*.

Oleribe, O. O., Momoh, J., Uzochukwu, B. S., Mbofana, F., Adebiyi, A., Barbera, T., ... & Taylor-Robinson, S. D. (2019). Identifying key challenges facing healthcare systems in Africa and potential solutions. *International journal of general medicine*, 395-403.

Osborne, S. (2020). *Public service logic: Creating value for public service users, citizens, and society through public service delivery*. Routledge.

Patil, T. K., & Rashidi, V. (2023). Digital Transformation within Manufacturing Companies. Unpublished. Msc Thesis. Jonkoping University.

Peppers, D., & Rogers, M. (2001). CRM Series marketing 1 to 1. . Makron Books.

Peppers, D., & Rogers, M. (2004). Managing customer relationships: A strategic framework. John Wiley & Sons.

Plekhanov, D., Franke, H., & Netland, T. H. (2022). Digital transformation: A review and research agenda. *European Management Journal*.

Quarfordt, O., & Aadan, L. (2021). Digital dynamic capabilities for digital transformation in SMEs. Unpublished Msc Thesis. Umea University.

Republic of Kenya (2023). *Kenya Health Sector Strategic Plan. Transforming Health Systems: Achieving Universal Health Coverage by 2022. Republic of Kenya*. http://guidelines.health.go.ke:8000/media/Kenya_Health_Sector_Strategic_Plan_July_2018-_June_2023.pdf

Romero, D., Gaiardelli, P., Pezzotta, G., & Cavalieri, S. (2019). The impact of digital technologies on services characteristics: towards digital servitization. In *Advances in Production Management Systems. Production Management for the Factory of the Future: IFIP WG 5.7 International Conference, APMS 2019, Austin, TX, USA, September 1–5, 2019, Proceedings, Part I* (pp. 493-501). Springer International Publishing.

Saleh, A., & Bista, K. (2017). Examining factors impacting online survey response rates in educational research: Perceptions of graduate students. *Online Submission*, *13*(2), 63-74.

Salvato, C., & Vassolo, R. (2018). The sources of dynamism in dynamic capabilities. *Strategic Management Journal*, *39*(6), 1728-1752.

Samsudin, Z. binti, & Ismail, M. D. (2019). The Concept of Theory of Dynamic Capabilities in Changing Environment. International Journal of Academic Research in Business and Social Sciences, 9(6), 1071–1078.

Sang-Chul, S. H. I. N., & Rakhmatullayev, Z. M. (2019, February). Digital transformation of the public service delivery system in Uzbekistan. In *2019 21st International Conference on Advanced Communication Technology (ICACT)* (pp. 703-709). IEEE.

Shibambu, A., & Ngoepe, M. (2024). Enhancing service delivery through digital transformation in the public sector in South Africa. *Global Knowledge, Memory and Communication*.

Stoumpos, A. I., Kitsios, F., & Talias, M. A. (2023). Digital Transformation in Healthcare: Technology Acceptance and Its Applications. *International journal of environmental research and public health*, *20*(4), 3407. https://doi.org/10.3390/ijerph20043407

Teece, D. J., & Pisano, G. (1994). The dynamic capabilities of firms: an introduction. *Industrial and Corporate Change*, 3(3), 537-556.

Tejada, J. J., & Punzalan, J. R. B. (2012). On the misuse of Slovin's formula. *The philippine statistician*, *61*(1), 129-136.

Ullah, T., Khan, U., Ellahi, M. B., & ul Hamid, M. (2023). Factors Affecting Service Delivery System At Local Level: An Analysis Of KP Local Government System. *Journal of Positive School Psychology*, *7*(5), 891-901.

Usak, M., Kubiatko, M., Shabbir, M. S., Viktorovna Dudnik, O., Jermsittiparsert, K., & Rajabion, L. (2020). Health care service delivery based on the Internet of things: A systematic and comprehensive study. *International Journal of Communication Systems*, *33*(2), e4179.

Wattiez, N., & Goy, H. (2023).The impact of digital transformation on business models: the case of innovation finance consultancies. *Finance Contrôle Stratégie*, 26-3.