

**THE EFFECTS OF DIGITAL TECHNOLOGY ADOPTION ON ORGANIZATIONAL
PERFORMANCE – A CASE STUDY OF WELLCOME TRUST PROGRAMME**

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DECLARATION

I, Mahsen Abud declare that this research dissertation is my original work and has not been submitted anywhere else in this University or any other University. To the best of my knowledge, understanding and conviction, the research dissertation does not contain any material produced for publishing or written by another person except where reference is made appropriately in the research dissertation itself.

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ABSTRACT

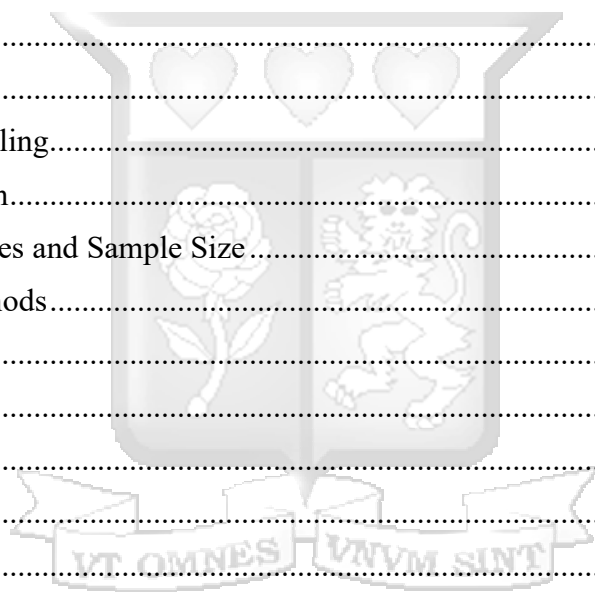
Digital transformation is reshaping the global landscape, driving innovation, enhancing lives, and creating interconnected systems. While digital technologies such as augmented reality, social media, artificial intelligence, big data, and the Internet of Things offer new business opportunities, create new business models and enhance customer experiences, many organizations struggle to fully harness their potential. Despite the potential for significant gains in innovation and operational efficiency through digital technology adoption, many organizations struggle to fully realize these benefits. This raises the key question of what drives digital technology adoption and how organizations can prioritize impactful, sustainable initiatives to enhance performance. This study examined the impact of digital technology adoption on organizational performance at Wellcome Trust Programme. Specifically, it explored the impact of enhanced communication collaboration, skill acquisition, digitized change management approaches, and data-driven decision-making on performance. The research is grounded in the Technology Acceptance Model, Innovation Diffusion Theory, and the Baldrige Performance Excellence Framework. This study adopted a positivist research philosophy and descriptive design, targeting a population of 760 staff members at the Wellcome Trust Programme, with a sample size of 263 determined using Yamane's formula. Questionnaires served as the primary data collection tool, and analysis was conducted using SPSS for descriptive statistics, along with inferential analysis such as correlation, regression, and ANOVA. The research aimed to deepen understanding of the drivers of digital technology adoption and their impact on organizational performance. It addresses a critical gap between firms leveraging digitalization for competitive advantage and those struggling to realize its benefits. Notably, the study found that digital technology adoption accounts for 26.2% of variations in organizational performance at Wellcome Trust Programme and concludes that a significant positive relationship between digital technology adoption and organizational performance exists. The study recommends that Wellcome Trust Programme should align skill acquisition initiatives with targeted, impactful training, assess and address skill gaps, and motivate continuous learning. The organization should integrate digital tools and structured change management processes to streamline transitions, and empower employees to achieve intended business objectives. The programme should invest in data analytics tools, infrastructure, and governance to enable data-driven decision-making. Additionally, the leadership team should develop digital leadership capabilities to navigate emerging technologies and align strategies with digital trends. Finally, fostering a culture of open communication and collaboration through use of technology platforms and inclusive decision-making will create an empowered and cohesive workforce.

Key Words: Digital transformation, Technology adoption, Organizational performance, Data-Driven Decision-Making

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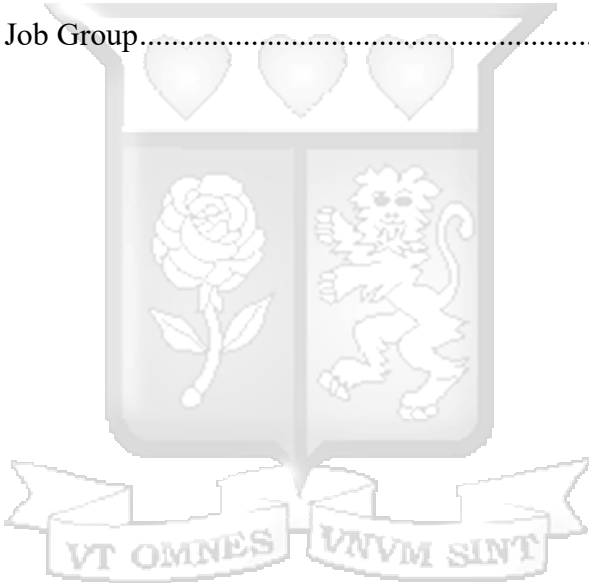
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LIST OF ABBREVIATIONS AND ACRONYMS

BANI	Brittle, Anxious, Non-Linear and Incomprehensible
BPR	Business Process Reengineering
DC	Dynamic Capabilities
IA	Innovation ambidexterity
ICT	Information Communications and Technology
IO	Innovation Orientation
VUCA	Volatility, Uncertainty, Complexity and Ambiguity
ANOVA	Analysis of Variance
EDCT	Emerging Digital Communication Technologies
SME	Small and Medium Enterprises



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DEDICATION

This research dissertation is dedicated to my family and friends who have inspired and encouraged me to pursue this MBA. They have endured my absence when they needed me most in enhancing their lives and I am grateful to them for the sacrifices they have made to ensure I complete this dissertation.



OPERATIONAL DEFINITION OF TERMS

Acquisition of knowledge and skills: It refers to the process of acquiring, developing and enhancing competencies, expertise and understanding in specific areas or domains through learning, training and practical experience (Doe, 2020).

Digital adoption: This is the process of incorporating new digital tools and systems to improve work processes, optimize operations, improve communication and collaboration, enhance data-driven decision making, promote innovation, and achieve organizational objectives. Digital adoption comprises several key pillars; such as, strategy, organizational culture, change management, processes, skills and software platforms (Kane, et al., 2019).

Digitized change management approaches: This entails approaches that involve use of digital technologies, tools and methodologies to plan, implement and monitor organizational changes effectively, efficiently and collaboratively (Brown & White, 2020).

Digital leadership: This is the ability of individuals to effectively leverage technological tools and steer organizations toward success in the digital age (Kane, et al., 2019).

Digital transformation: This is an organizational transformation that integrates digital technologies and business processes in a digital economy (Liu, et al., 2011).

Enhanced communication collaboration: This refers to use of advanced tools, techniques and strategies to facilitate effective and efficient interaction, information sharing and teamwork among individuals or groups within an organization (Smith & Johnson, 2021).

Enhanced data-driven decision making: This is the use of techniques, processes and advanced data analytics tools to gather, analyze, interpret and use data effectively and efficiently in making informed and strategic decisions within an organization (Wang, et al. 2018).

Organizational performance: This refers to the overall effectiveness, efficiency and success of an organization in achieving its goals, objectives and desired outcomes across various dimensions; such as, financial, operational, customer satisfaction and employee engagement (Dost, et al., 2016).

CHAPTER ONE

INTRODUCTION

1.1 Background of study

Technology adoption for businesses refers to the process in which businesses choose, onboard, test and integrate technologies and innovations into their daily operations, practices, customer experience journeys and employee empowerment to achieve organizational goals (Andriole, 2023). Digital technology plays a major role in various businesses today as it has been adopted in order to expedite strategic objectives. Andriole (2023) notes that new business models and technologies continue to emerge and evolve over time. However, digital technology adoption requires the firms to be aware, accept and assimilate to new technological innovations and business models. Digitalization of processes, functions, services and value chain ecosystems have played critical role in enabling organizations become what is known as, Future ready (Stephanie , Peter, & Ina, 2022). Investments in technology by organizations have experienced a positive return on overall investment at around 30% for established technologies; and around 70% for disruptive or new technologies (World Economic Forum Report, 2018).

Globally, technology adoption and application has been at the forefront of the digital transformation agenda within organizations. Stephanie, Peter and Ina outline that Future ready firms are adaptable, agile and are able to succeed in almost any environment and can outperform competitors in terms of growth and performance (2022). For example, Netflix adopted technological shift in which it anticipated the behaviour of customers towards streaming video services. The Netflix firm has expanded from 10 million subscribers in 2010 to around 160 million subscribers in 2020 (Michelman, 2020). On the contrary, Nokia as a technological firm became successful in the 1990s and 2000s but it could not sustain the competitive technological evolution by other firms like Apple's iPhone and Google's Android electronic systems. This forced Nokia out of market by 2016 placing it among small technological markets in the world today (Michelman, 2020)

Digital technology adoption in Africa is a topic of importance and interest. African continent is also experiencing a digital revolution with the potential to transform various sectors due to the rapid expansion of digital infrastructure, connectivity and access to mobile devices (Kugun, 2021). The main sectors that crave for digital technology adoption for high performances include: healthcare, education,

agriculture among others. Online businesses have taken shape in African nations including electronic transactions in almost every mobile and banking system. Makau (2020) attests that those digital technologies; such as, mobile payment systems, e-commerce platforms and digital communication tools have solved issues of financial inclusions and enhanced access to information and civic participation. However, setbacks like digital divide, infrastructure limitations, regulatory frameworks and skill gaps are still prominent in Africa towards digital transformation (Makau, 2020).

Kenya is experiencing acceleration of digital technology adoption in various organizations and institutions. There is rise of digital startups, fintech companies and e-commerce platforms that portray a significant growth of digital ecosystem in Kenya (Makau, 2020). The usage of mobile money through M-Pesa has also enhanced the increase of internet penetration to various parts of the country. The Kenyan Government's initiatives on introduction of digital services have also solved long queues experienced in public offices. However, Kenya experiences some challenges that have come with technology, which include, cybersecurity, bridging digital divide in rural areas and expensive digital literacy (Kamau, 2021).

1.1.1 The concept of digital technology adoption

Digital technologies are widely recognized to enhance efficiency and improve existing revenue streams and customer experiences. This is attained through the productivity of staff, being cost effectiveness and promoting development of new business channels (Andriole, 2023). The adoption of digital technologies is achieved through knowledge, persuasion, decision, implementation and confirmation (Rogers, 2003). The adopted innovations that are mostly initiated by individual thrive in establishing communication avenues, social connections and persistent innovation of adoptive technological choices. Therefore, it is critical to understand that digital technology decisions are part and parcel of the business decisions made in any given firm. The World Economic Forum Report (2018) posits that key digital technology enablers should be taken into consideration in order to ensure that firms maximize their digital investments. These enablers, which may include an agile and digital savvy leadership team, facilitate the digitalization agenda that should emphasize; and appropriate the resources allocated for the digital technology initiatives.

1.1.2 Digital technology adoption in organizations

Organizations that achieved positive returns on their investments in technologies aligned their technology acquisitions to the corporate strategies and put in place an effective change management

strategy in order to enhance their skill mix within the organization (Stephanie , Peter, & Ina, 2022; World Economic Forum Report, 2018). Achieving a positive return on investments requires organizations to develop specific cases on how to deploy adopted technologies in the organizations so as to bring out the dynamic capabilities (World Economic Forum Report, 2018); as well as the innovation ambidexterity, which they seek to enable them possess a competitive advantage in the marketplace (Sultana, Akter, & Kyriazis, 2022). Organizations that have invested in intelligent and connected data infrastructure position themselves to support data-driven digital environments and ecosystems that are aligned with current and future business requirements (Andriole, 2023).

However, some businesses in different organizations are unable to fully exploit the technologies adopted; thus, derailing digital transformation initiatives from meeting the objectives set in the businesses (World Economic Forum Report, 2018). This challenge has led organizations not to achieve the anticipated return on investment they expected; hence, they miss opportunities for growth and creation of value due to lack of appropriate knowledge and capabilities for exploiting opportunities in the marketplace (Stephanie , Peter, & Ina, 2022).

1.1.3 Wellcome Trust Research Programme

Wellcome Trust Programme was formed in 1989. It partners with the Kenya Medical Research Institute (KEMRI); one of Africa’s leading health research institutions. It has partnered with KEMRI and the University of Oxford to establish a research programme at the Kenyan Coast. The Wellcome Trust Research Programme as a Non-Governmental Organization (NGO) is a collaborative endeavor that involves KEMRI, the Wellcome Trust Programme, and the University of Oxford (Wellcome Trust Programme Report, 2023). This is achieved through strategic investments in capacity building, training initiatives and scientific infrastructure, which are aimed at nurturing scientific leadership and innovation within the region. The programme has invested in digital tools; such as, data collection, analysis and visualization to achieve operational efficiency, to facilitate team collaborations between staff in different geographical locations, to enhance knowledge management practices, and to improve research outcome (Wellcome Trust Programme Report, 2023). Therefore, the organization offers a viable case study of investigating the effects of adopting digital technologies in relation to its performance

1.1.4 Components of digital technology adoption for organizational performance

Studying the effects of digital technology adoption on organizational performance is paramount in today's business landscape. It is critical for organizations to maintain a competitive advantage, enhance operational efficiency, and foster innovation and creativity to remain relevant towards surviving the stormy business environment (Barney, 1991). Andriole (2023) also explains that firms that have intelligent data infrastructure have a competitive advantage, which enables them to develop new business models through exploration and exploitation of data. This is because organizations that adopt digital technology advance rapidly compared to those that are not technology savvy.

Adoption of digital technology for organization performance is explained through communication collaboration. Smith and Johnson (2021) argues that multiple communication channels, collaborative teamwork and use of digital platforms lead to improved collaboration, enhanced productivity and have a positive impact on performance. On another account, Kim, et al. (2021) account that effective communication contributes to higher employee engagement, which leads to improved organizational performance indicators; such as, growth of revenue and customer loyalty. Finally, Wang, Chen, Zhang (2018) demonstrate that collaborative teams exhibit superior innovation through sharing of ideas, which lead to improved performance metrics; such as, new product launches and market share gains.

Acquisition of skills towards adopting digital technology for organization performance is crucial. Brown and White (2020) affirm that there is positive impact of knowledge acquisition and skill development on organizational effectiveness, efficiency and competitiveness that may lead to easy adoption of digital technology. Secondly, Smith and Johnson (2021), highlight that the employees who continuously acquire and update their industry knowledge and technical skills are better equipped to handle complex tasks, adapt to the ever-changing market dynamics, and contribute to innovation and problem-solving within the organization. Finally, Wang, Chen and Zhang (2018) and Gupta, A. K. and Gupta, K. (2019) demonstrate that organizations, which promote a culture of perpetual learning, knowledge exchange and collaboration amongst employees experience improved performance metrics; such as, innovation, process efficiency, customer service quality and financial performance.

Digital technology adoption is important for organizational performance when digitized change management approaches are put into consideration. Lee, Brown and Garcia (2019) who find out that organizations that adopt digital communication channels; such as, collaboration software, social intranets and project management tools experience improved sharing of information, enhanced stakeholder engagement and improved alignment during change processes. On a similar account, Johnson and Smith (2020) and Kim, Lee and Brown (2021) display that organizations using data

analytics for change management could identify Key Performance Indicators (KPIs) better, monitor progress and optimize change interventions, which as a result may lead to more successful outcome.

The final vital component of digital technology adoption for organizational performance is enhanced data-driven decision-making. Doe (2020) states that digital technology adoption has significantly enhanced data-driven decision-making within organizations by providing advanced analytics tools and platforms that enable more accurate, timely and insightful decision-making processes. Similarly, Brown and White (2020) also confirm that digital technologies enable real-time data monitoring and reporting, and facilitate agile and responsive decision-making in dynamic business environments.

In the study, the operationalization of variables was structured to ensure precise measurement and analysis. The independent variable, digital technology adoption, was defined by the extent to which digital tools and technologies have been integrated into organizational processes. It was measured across four dimensions: enhanced communication collaboration, acquisition of skills, digitized change management approaches and enhanced data driven decision making. The dependent variable, organizational performance, was operationalized in terms of key performance indicators based on the Baldrige performance excellence framework such as leadership, customer focus, workforce, measurement, strategy, analysis and knowledge management, results and operations. Data for these variables were collected using a structured questionnaire, which included both open-ended and Likert-scale questions that captured respondents' perceptions and experiences. The questionnaire items were designed and tailored to the context of the Wellcome Trust Programme. This approach ensured that the constructs are measurable, reliable, and aligned with the study's objectives.

1.2 Problem Statement

Technological advancement today fosters innovation and creativity on businesses that enhance efficient delivery of goods and services to the customers or clients (Stephanie , Peter, & Ina, 2022). New business models are being created through the use of emerging technologies; for instance, Artificial Intelligence, data science, robotics, exploitation of big data and Internet of Things (Andriole, 2023). While the adoption of digital technology has significant potential, some businesses are struggling to fully exploit their investments in digital technologies (Teece, 2018). This has raised pertinent concerns on how digital technology adoption can be optimized to facilitate firms in capitalizing on digitalization and investing in solutions that yield the most significant long-term benefits.

Ardito, et al. (2020), and Cabrilo and Dahms (2020) explain that digital technology adoption and application have played vital roles as enablers of businesses around the world; thus, helping to improve internal processes and structures, control costs and manage risks to ensure that businesses gain a competitive edge in the business environment. Studies have shown the linkage between adoption and application of appropriate technologies in various industries and improved organizational performance (Dost, Ali, & Tariq, 2016; Giniuniene & Lolita, 2015). Wilden and Gudergan (2017) highlight the importance of service-dominant orientation in driving firm performance through technological innovations. However, a notable gap in the literature pertains the specific challenges, strategies and outcomes associated with digital technology adoption within organizations focused on scientific research and healthcare.

Kugun (2021) demonstrated that Kenya and the countries within the East Africa region have invested heavily in acquiring technological capabilities and competencies. Feiler and Teece (2014) emphasize the effects of digital dynamic capabilities in leveraging technology for competitive advantage for both developed and developing countries. Unfortunately, organizations in Kenya among others in developing nations still need to enhance their leadership to be agile and become digital savvy so as to earn competitive advantage with developed nations (Kugun, 2021).

Therefore, these conceptual insights called for an empirical validation in real-world contexts in order to ascertain their applicability and relevance in organizations; such as, Wellcome Trust Programme. The study investigated how digital technology adoption influenced organizational performance through dwelling on the following variables: enhanced communication collaboration, acquisition of skills, digitized change management approaches and enhanced data-driven decision-making. The study provided actionable insights for organizations seeking to leverage digital technologies for improved performance and impact.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study was to investigate the effects of digital technology adoption on organizational performance at Wellcome Trust Programme.

1.3.2 Specific Objectives

The specific objectives of the study were:

- i. To investigate the influence of enhanced communication collaboration on organization performance at Wellcome Trust Programme.
- ii. To determine the influence of acquisition of skills on organizational performance at Wellcome Trust Programme.
- iii. To evaluate the influence of digitized change management approaches on organizational performance at Wellcome Trust Programme.
- iv. To investigate how enhanced data-driven decision-making influences organizational performance at Wellcome Trust Programme.

1.4 Research Questions

To address the above research objectives, the study responded to the following research questions:

1. What is the influence of enhanced communication collaboration on organizational performance at Wellcome Trust Programme?
2. What is the influence of acquisition of skills on organizational performance at Wellcome Trust Programme?
3. What is the influence of digitized change management approaches on organizational performance at Wellcome Trust Programme?
4. How does enhanced data-driven decision-making influence organizational performance at Wellcome Trust Programme?

1.5 Significance of the Study

The findings of this study are relevant to the following groups of stakeholders:

1.5.1 Consumers of Technology Products and services

This study will help institutions and other consumers of technology to understand the impact of choosing appropriate technology (people, processes and technology) on its organizational performance. This study will also aid institutions and other consumers of digital technologies to adopt appropriate technologies that will have positive influence in their operations; hence, granting them a competitive advantage towards enhanced organizational performance.

1.5.2 Government and Policy Makers

The findings of this study shall be useful to the Government since it will aid in developing policies and standards that can guide institutions when investing in digital technology products and services. These policies will provide the organization with capabilities to operate optimally in a Volatile, Uncertain, Complex and Ambiguous (VUCA), and Brittle, Anxious, Non-Linear and Incomprehensible (BANI) world in order to achieve superior organizational performance in the future.

1.5.3 Academic Scholars and Students

Students and scholars will attribute to the relevance on the findings and discussions of the study, which will expand the prevailing body of knowledge on the effects of digital technology adoption on organizational performance. Secondly, the technology adoption enablers discussed in the study will help in understanding the nuances of adoption rates between different sectors and industries. The findings will also provide a reference point for future studies in the area of digital technology adoption and organizational performance. Finally, the study will suggest areas for future research besides being cited as empirical evidence by scholars and researchers.

1.6 Scope of the Study

The study focused on the effects of digital technology adoption on organizational performance in research institutions within the healthcare sector in Kenya. It investigated the following variables: enhanced communication collaboration, acquisition of skills, digitized change management approaches, and enhanced data-driven decision-making on organizational performance. The study also acknowledged that there may be other variables that influence organizational performance, other than the digital technology adoption but they did not fall within the scope of the study. The choice of research institutions in the health sector in Kenya was guided by the fact that a significant portion of resources have been invested in training people, adopting technology, and reengineering of processes over the past few years. This offered a good pool to gather diverse views from a cross section of staff working for the research institutions within the healthcare sector in Kenya.

The study focused on employees of Wellcome Trust Programme as the unit of analysis given that they have got international partnerships and collaborations. International partnerships and collaborations were critical in the study because they helped in examining how technology adoption has enabled the local research institutions to compete and collaborate with their counterparts outside the country and globally. The use of employees of Wellcome Trust Programme also assisted in examining the effects of technology transfer that affect the institutional profitability and employee performance. The

population of the study, was 760 and a sample of 263, had been generated using the Yamane's formula. The study was conducted within a period of six months from October 2023 to July 2024. The duration proved to be adequate to allow piloting of research instruments as well as to electronically administer the research instruments, collect feedback and carry out analysis of the data collected, and to finalize on the dissertation write up.

1.7 Chapter Summary

This chapter has discussed background information and defined the problem being investigated in the study. The sections, thereafter, have presented the research objectives and research questions. The presentation of the significance and scope of the study have also been addressed in the chapter.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides a review of pertinent literature associated with the study. It is structured into several subsections; these include, theoretical review, empirical review, research gaps, conceptual framework, the operationalization of variables and the chapter summary.

2.2 Theoretical Framework

The theoretical framework refers to the outline of a study that is anchored on an existing theory or framework in a particular field of enquiry that correlates with the study objectives. A theory is a set of interrelated concepts, definitions and propositions that are advanced to predict phenomenon or facts (Cooper & Schindler, 2011). The theoretical framework explains the path of a study and grounds it firmly on theoretical constructs (Dickson, Emad, & Joe, 2018). According to Ravitch and Carl (2016), the framework provides researchers with assistance in placing and contextualizing established theories within their studies, which function as a guiding framework and central point of focus. This part of the study applies the following theories:

2.2.1 Technology Acceptance Model (TAM)

Fred Davis introduced the Technology Acceptance Model (TAM) in 1986, which was subsequently further developed and expanded by Venkatesh and Davis. It is an important model in the field of information systems and technology adoption research. Venkatesh and Davis (2000) state that a person's inclination to utilize a technology is shaped by two main factors: their perception of its usefulness and the ease with which they perceive they can use it. According to Venkatesh and Davis (2000), perceived usefulness points to the individuals' perception of the extent to which the use of technology will improve their productivity or help them to achieve specific goals. This perception is subjective and varies depending on factors; such as, the individuals' tasks, needs and expectations regarding the technology. Therefore, perceived usefulness plays a crucial role in shaping an individual's attitude towards adopting and applying the technology (Venkatesh & Davis, 2000).

Secondly, perceived ease of use refers to an individual's perception of how effortless and user-friendly the technology is used (Venkatesh & Davis, 2000). It encompasses factors; such as, the simplicity of

interface design, ease of learning and navigation within the technology. A higher perceived ease of use contributes to a more positive attitude towards using the technology that leads to increased adoption and usage. These perceptions in the use of technology directly influence the individual's behaviour. In other words, if individuals perceive technology as useful and easy to use, they are more likely to have a positive attitude towards using it and subsequently engage in actual usage behaviour (Venkatesh & Davis, 2000).

Arguments in favor of TAM highlight its simplicity and effectiveness in predicting technology adoption behaviours (Venkatesh & Davis, 2000). However, criticisms of TAM include its focus on individual perceptions and attitudes, which may not fully capture the complexities of organizational technology adoption processes. Additionally, TAM's reliance on subjective perceptions has been challenged as other factors can affect the decision on use of technology.

TAM has been widely applied in research contexts to study technology adoption behaviors among individuals and within organizations (Venkatesh & Davis, 2000). It provides a structured framework to understand the psychological and cognitive processes that underlie technology acceptance. This makes it valuable for designing interventions and strategies to promote technology adoption and usage. The model is applicable to the current study as it provides insights on how attitudes and behaviours affect adoption levels. By examining employees' perception on the usefulness of digital technologies, the study gains insights into the attitudes and intentions of employees towards adopting these technologies. This information informs strategies for promoting technology acceptance and usage within the organization that positively impact organizational performance.

The Technology Acceptance Model (TAM) provides a valuable framework for understanding the factors that influence individual technology adoption. Within the context of digital technology adoption in organizations, TAM highlights the crucial role of perceived usefulness and perceived ease of use. Enhanced communication and collaboration, facilitated by digital tools, are perceived as useful when employees believe they improve efficiency, coordination, and knowledge sharing (Venkatesh & Davis, 2000). Similarly, the acquisition of new skills through digital training programs is perceived as useful when employees believe it enhances their job performance and career prospects (Al-Gahtani, 2016). Digitized change management approaches, such as online platforms for disseminating information and gathering feedback, are perceived as easier to use when they are user-friendly, accessible, and integrate seamlessly into existing workflows (Sun & Zhang, 2006). Finally, data-driven decision-making, enabled by digital technologies, is perceived as useful when employees believe it

leads to more informed and effective organizational decisions (Sun & Zhang, 2006). In essence, TAM suggests that by emphasizing the perceived usefulness and ease of use of these digital initiatives, organizations can increase employee acceptance and ultimately drive successful digital technology adoption.

2.2.2 Diffusion of Innovations Theory

Everett Rogers introduced the Theory in 1962 (Rogers, 1962). The theory focuses on how innovations; such as, digital technologies are adopted and spread within a social system (Rogers, 2003). Rogers (2003) states that, “adoption occurs through five stages: knowledge, persuasion, decision, implementation, and confirmation”. Innovations are adopted by different categories of individuals based on their innovativeness, which range from early adopters to laggards. The theory underscores the impact of digital communication avenues, social connections and perceived characteristics of the innovation on adoption choices. One of the key concepts of the Diffusion of Innovation Theory is the categorization of adopters into different groups based on their willingness to adopt innovations (Rogers, 2003). This theory groups individuals as innovators, early adopters, early majority, late majority and laggards. Innovators and early adopters are typically more receptive to new technologies and are often the first to embrace innovations. The late majority and laggards are more cautious and require more time and persuasion prior to adopting new technologies (Rogers, 2003).

Central to the theory is the effect of digital communication channels, social networks and the perceived attributes of the innovation. Communication channels; such as, mass media, interpersonal networks and opinion leaders play an important role in disseminating information about innovations and influencing adoption decisions. According to Rogers (2003), social networks contribute to the diffusion process as individuals are often affected by the behavior and their peers’ opinions and social groups. Additionally, perceived attributes of innovation including its relative advantage, compatibility with existing practices and complexity affect an individual’s attitude towards adoption. Other factors that shape the attitudes of individuals are trialability of technologies and observability of the same in practice (Rogers, 2003). Therefore, innovations that are perceived to offer significant advantages consist of: being compatible with current practices, easy to use, observable and allow trial periods that are more likely to be adopted quickly and widely (Rogers, Diffusion of Innovations, 2003).

Arguments in favor of this theory highlight its elaborate framework for understanding the diffusion process of innovations. It accounts for the social and psychological factors that influence adoption

decisions, which make it relevant for studying digital technology adoption within organizations. Conversely, opponents of the theory argue that the theory may oversimplify the adoption process, and overlook contextual factors that can impact adoption rates. Moreover, the critics also raise a contention that the theory's focus on individual characteristics may not fully capture the collective dynamics of organizational adoption processes (Rogers, 1962).

Nevertheless, the theory is significantly applicable to the current study as it offers a structured approach to understanding how digital technologies are adopted within organizations. In summary, the Theory provides an elaborate framework for understanding how digital technologies and other innovations are adopted and spread within organizational and societal contexts. Considering factors; such as, communication channels, social networks and perceived attributes enables researchers and practitioners to develop strategies that enhance adoption and successful implementation of digital technologies. This will ultimately drive organizational performance and societal change. In addition, the theory also aids to identify strategies that promote widespread adoption and amalgamation of the digital technologies to enhance organizational performance.

The Diffusion of Innovations Theory provides a valuable lens for understanding how digital technologies are adopted within organizations. This theory posits that the spread of innovations occurs through a series of stages, influenced by factors such as relative advantage, compatibility, complexity, trialability, and observability (Rogers, 2003). Enhanced communication and collaboration tools, if perceived as offering significant advantages over existing methods such as increased efficiency, enhanced team cohesion and improved coordination are more likely to be adopted (Tornatzky & Klein, 1982). Similarly, the acquisition of new skills through digital training programs is facilitated when these programs are compatible with existing work routines, existing employee skill sets and perceived as easy to learn and apply facilitating learning without overwhelming users (Wang et al, 2017). In the context of digitized change management approaches, organizations adopting new digital tools for managing change are more successful when these tools are perceived as compatible with existing processes and demonstrate clear benefits in managing transitions (Sultana et al, 2022). Diffusion of Innovation Theory also underscores the importance of trialability and reduced complexity in digitized change management processes, as organizations are more likely to adopt change management systems that allow for phased implementation and are easy to integrate into current practices (Zhang et al, 2021). Finally, data-driven decision-making tools are more likely to diffuse within an organization when their relative advantage, in terms of improved accuracy and generation of actionable insights, is

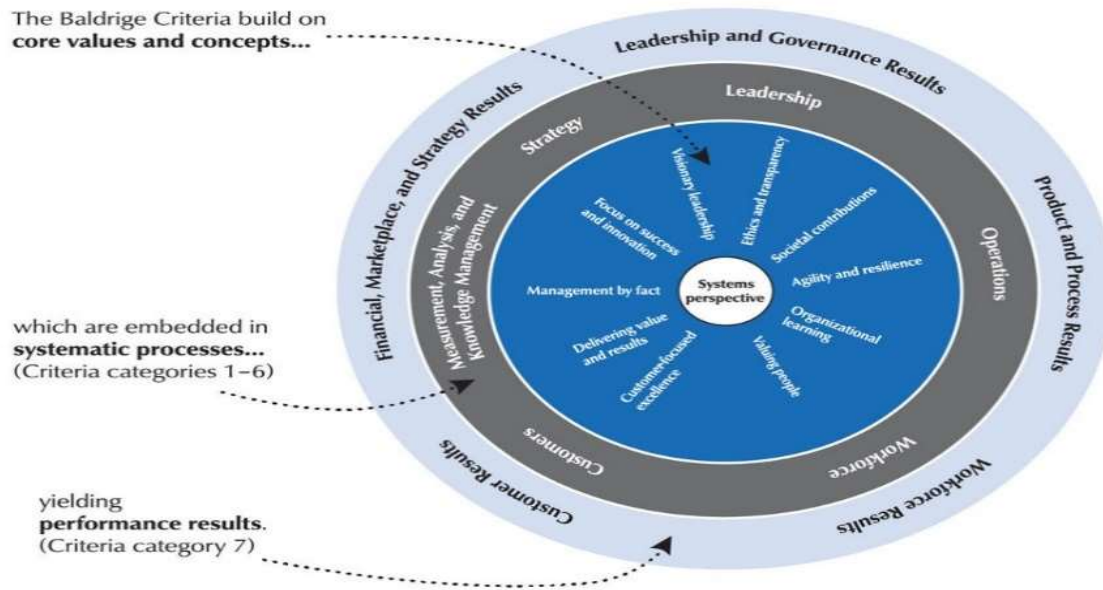
clearly demonstrated and observed by decision-makers (Sultana et al, 2022). By understanding these factors, organizations can strategically implement digital technologies, fostering their diffusion and maximizing their impact

2.2.3 Baldrige Performance Excellence Framework

The framework was proposed by Malcolm Baldrige in the 1980s, where it at enhancing the competitiveness of US firms by demonstrating excellent performance in seven key areas (Parast & Golmohammadi, 2019). According to Parast and Golmohammadi (2019), performance excellence framework has gained global acceptance as the premier standard for performance excellence in organizations. It encompasses a set of principles and factors that yield enhanced organizational performance in various facets when employed as managerial framework (Baldrige Performance Excellence Program, 2015). The framework uses a systems perspective and helps organizations to assess and improve their processes and results by examining their capabilities along the seven areas under the Baldrige framework (Parast & Golmohammadi, 2019). These areas include: leadership, customer focus, workforce, measurement, strategy, analysis and knowledge management, results and operations (Parast & Golmohammadi, 2019).

Central to this framework is the systems perspective approach where various parts of the organization are managed as a unified whole and directed towards achieving the organization's mission (Parast & Golmohammadi, 2019). This involves certainty that plans, measures, processes and actions align and cohesively function as part of the whole system. It is imperative that each element within the organizational management system functions cohesively, interconnects fully and benefits mutually (Baldrige Performance Excellence Program, 2015). The diagram below presents the pictorial presentation of the framework.

The Role of Core Values and Concepts



From Baldrige Performance Excellence Program, 2023. 2023-2024 Baldrige Excellence Framework®: Proven Leadership and Management Practices for High Performance. Gaithersburg, MD: U.S. Department of Commerce, National Institute of Standards and Technology. <https://www.nist.gov/baldrige>.

Figure 2-1: Baldrige Performance Excellence framework

Source: nist.gov (2023)

The framework is built upon interconnected fundamental principles and concepts that are ingrained in high-performing organizations. These serve as the foundation for: integrating essential performance and operational needs within a results-driven structure that fosters a basis for action, feedback and continual success (Parast & Golmohammadi, 2019).

We begin with the visionary leadership where leaders are expected to set an organizational vision, enforce client focus, demonstrate visible, and clear organizational ethics and values as well as setting high prospects for the human capital (Parast & Golmohammadi, 2019). Leadership should set the tone for ethical behaviour in the organization through sharing accurate information, putting in place transparent processes, encouraging open communications and collaborations among the staff. Leaders should take an active stance in emphasizing the significance of the effect and contributions of the business to the well-being of the communities in which it operates. This can demonstrate its focus on sustainability and community well-being through hiring employees from the society.

Secondly, the organization is expected to be agile and resilient by building the capabilities for supporting rapid change and flexibility (Parast & Golmohammadi, 2019). Firms need to be

ambidextrous by building capacity to expect and prepare for recovering from disruptions in the business environment. Resiliency also addresses the ability to protect the workforce through multi-skilling and diversifying the customer base to manage risks associated with having few and powerful customers who could adversely affect the business when they change their consumer preferences. One of the core values is the appreciation of the human capital as the most important organizational asset that affects all other stakeholders within the organization.

Other core values bring out the need for the business to be customer focused; whereby, the stakeholders listen to the voice of the customer as they develop their products and services. It is vital to understand the requirements of the customers for the success of the business and to fulfil their satisfaction (Parast & Golmohammadi, 2019). The business should focus on creating and developing value through its economic activities. Therefore, the firm needs to focus on areas; such as, product development, customer experience, workforce satisfaction and results (Parast & Golmohammadi, 2019).

Innovation serves as the focal point to deliver new capabilities and competitive advantages to businesses. It recognizes the rapid change of business landscape in which it may evict the organization out of business if not implemented. The organization requires a grasp of the immediate and enduring elements within and in its surrounding in order to survive in the present and future state of digital technology adoption (Andriole, 2023). According to Griffith (2017), innovation involves instigating significant alterations in order to enhance operations, products, services, processes, programs and business models. The organization and the management team need to adopt decision-making processes that are data-driven as they measure and analyze key result areas (Griffith, 2017). Hence, the analysis of the performance should facilitate organizational resources and capabilities alignment to where the resources are most required so as to ensure organizational success.

As per the World Economic Forum Report (2018), leadership concentrates on upholding strategic vision, expertise, purpose, intention and orientation across management tiers to guarantee agile decision-making processes regarding innovation. The leadership category entails setting and articulating the vision and expectations of the organization. This demonstrates visible and clear organizational ethics and values. It also sets high anticipations for the human capital. Strategy involves articulating the vision for the future and directing organizational capabilities and resources towards achieving the future through specific, measurable, and realistic goals and objectives (Griffith, 2017). It deals with the ability to tap into the dynamic capabilities and innovation ambidexterity of the organization in order to give it the agility and organizational resilience that are needed to compete in

a globally competitive environment (Birkishaw & Gibson, 2004). The firm needs to build the capacity to expect (sense), prepare for (seize), and exploit and reconfigure their internal and external strengths and capabilities. Focusing on the needs of the customer brings out the aspects of understanding their voices, which creates value in the eyes of the customer through understanding what is critical to satisfaction and has a consistent customers' engagement strategy (Stephanie , Peter, & Ina, 2022).

Workforce also emanates as a category in the framework. It is the human capital that possesses the right skillset, experience, exposure and digital mindset for the organization to focus on innovation and continuous learning (World Economic Forum Report, 2018). Workforce depends on the organization that creates a working environment for its human capital through enhancing employee experience, engagement, ideas and creative thinking (World Economic Forum Report, 2018).

Operations focus on a well-designed, efficient, and managed systems that ensure business in the organization is resilient, agile and able to collaborate with other stakeholders within the value chain (Baldrige Performance Excellence Program, 2015). The resiliency also ensures that the firm can withstand shocks from the environment when it puts in place mechanisms, business models and digital ecosystems that can give it a competitive advantage through exploitation of its dynamic capabilities and ambidexterity (Baldrige Performance Excellence Program, 2015). Therefore, operations meet the customers' needs since they create value as perceived by various stakeholders.

Measurement, analysis and knowledge management is an aspect that deals with providing feedback loop that is vital and focuses on how we measure, analyze, review and improve organizational performance (Baldrige Performance Excellence Program, 2015). This criterion also focuses on how information and knowledge assets are managed throughout the lifecycle.

The final part, which is the results category focuses on delivery of excellence. It values across the entire organization through leadership that is agile, drives change and empowers teams to experiment new technologies (Baldrige Performance Excellence Program, 2015). This performance criterion focuses on delivery of the desired results across the six Baldrige performance criteria levels so as to meet and exceed organizational goals.

Baldrige Excellence Performance framework is relevant to the study because it brings about a holistic view of organizational performance. It provides a learning lens in which we can examine the influence of digital technology adoption on the different aspects of the Baldrige performance excellence criteria. It also provides a systemic view of performance that enables us to look at how digital technology

adoption impacts the different facets of an organization. This impact enables the firm to navigate the change in the environment, achieve operational efficiency and effectiveness, improve financial results, embrace continuous learning, enhance customer experience, and win new markets (Baldrige Performance Excellence Program, 2015). This framework is useful for it helps the investigator to address the research objectives and questions related to organizational performance with respect to their effects of digital technology adoption. The proposed conceptual model for this study utilizes the Baldrige framework as the dependent variable in order to holistically examine the performance management. The framework consists of the following independent variables: enhanced communication collaboration, acquisition of skills, digitized change management approaches and enhanced data-driven decision-making.

2.3 Empirical Review

2.3.1 Enhanced communication collaboration and organizational performance

Digital technology adoption has significantly enhanced communication collaboration within organizations. It has provided advanced tools and platforms that facilitate seamless interaction and teamwork. For instance, the combination of digital communication tools; such as, video conferencing, instant messaging, and collaborative workspaces has eliminated geographical barriers; hence, enabling real-time communication among team members regardless of their physical locations (Doe, 2020). Moreover, digital collaboration platforms allow teams to share documents, work on projects, and efficiently track progress, which lead to improved collaboration and productivity (Smith & Johnson, 2021). The adoption of digital technologies has generally revolutionized the way teams communicate and collaborate, which makes it easier for organizations to attain their objectives and goals in a dynamic and interconnected environment.

In Canada, Smith and Johnson (2021) carried out a case study that revealed a strong relationship between communication effectiveness and various performance metrics that included productivity and employee satisfaction. Similarly, Lee, et al. (2019) also conducted a meta-analysis on luxury brand communities in South Korea that found higher levels of employee engagement, effective communication and improved organizational performance, which ultimately led to the growth of revenue and customer loyalty. These findings underscore the critical effect of digital, clear and transparent communication in driving overall organizational success. Therefore, the studies have consistently highlighted the positive effect of enhanced communication on organizational performance.

In Taiwan, Wang, et al (2018) conducted a longitudinal study in the technology sector, where they demonstrated that collaborative teams exhibited superior innovation performance metrics; such as, the launching of new products and the gain in market shares. This highlights the importance of fostering collaboration among employees to leverage diverse perspectives and expertise that may lead to innovative solutions and competitive advantages. Hence, research on collaboration has emphasized its significant contribution to innovation performance within organizations.

In Ecuador, Rodriguez, et al. (2017) conducted a study in the retail industry that revealed a positive correlation between effective internal communication, customer satisfaction and quality ratings of services. This suggests that improved communication practices can translate into better customer experiences and higher levels of customer satisfaction, which ultimately may impact organizational performance and competitiveness. In this regard, commendable results are found from studies that examine the link between employee engagement, communication quality and customer satisfaction.

In China, Wang and Liu (2017) conducted a cross-industry study that demonstrated a positive association between a strong learning culture and knowledge sharing norms. The study revealed that open communication improved organizational performance through innovation rates and market competitiveness. These findings underscore the significance of developing a culture that encourages continuous learning and knowledge exchange for enhanced organizational performance. Therefore, the effect of digital knowledge sharing and a supportive learning culture in driving organizational performance has shown significant outcome in the study.

In addition to the above review, Wang, et al. (2021) conducted a multi-level analysis in China that depicted collaborative leadership styles, which are characterized by participative communication and support for teamwork. These were associated with higher team performance metrics; such as, task completion rates, team satisfaction levels and successful project completion rates. The study highlights the significance of leadership behaviours that promote collaboration and empower teams to achieve their goals effectively. From the study, the research on collaborative and digital savvy leadership has shown its positive impact on team performance outcomes. Therefore, these findings shall lead the study in investigating the influence of enhanced communication collaboration on organizational performance at Wellcome Trust Programme.

In South Africa Phumzile et al (2021), conducted a study using the case study approach focusing on Information Technology (IT) capability in South African mines and how they impact organizational performance. The study revealed that IT capabilities especially communication and collaboration tools

had a positive influence on performance when mediating factors such as staff digital skills, adequate IT investment and effective IT outsourcing were in place (Phumzile et al, 2021). These findings suggest that a staff compliment that is properly trained and adequately resourced with digital tools can effectively deliver positive results in relation to performance. The findings highlight that an organization's IT capabilities pay off if they are aligned with the business strategy and the operational context of the organization (Phumzile et al, 2021). The main contribution of this study was the proposal of an IT capability model based on the following aspects; IT architecture, IT infrastructure, IT human resources and IT collaboration resources.

The study conducted by Ashiru et al (2023) in Nigeria, focused on exploring how emerging digital communication technologies (EDCT) such as social media and virtual communication technologies affected the small and medium enterprises (SMEs') resilience during the COVID 19 pandemic. The study established that EDCT played a critical role in activating SMEs' resilience during the crisis through four drivers: facilitating connections and bonding with stakeholders (staff, clients, and suppliers); enabling effective and timely collaborations; activating process diversification; and enhancing supply chain flexibility (Ashiru et al, 2023). The findings underscore the importance of emerging digital communication technologies in facilitating communication and information sharing within an organizational context.

2.3.2 Acquisition of skills and organizational performance

The acquisition of skills and knowledge within organizations plays a crucial role in shaping organizational performance across various dimensions. Research by Brown and White (2020) has consistently shown the positive impact of knowledge acquisition and skill development on organizational effectiveness, efficiency and competitiveness. Digital technology adoption has significantly enhanced the acquisition of knowledge and skills within organizations by providing innovative tools and platforms that facilitate learning and development (Andriole, 2023). For instance, the integration of digital learning platforms, online courses and virtual training sessions has made learning more accessible, flexible and interactive for employees (Doe, 2020). These digital tools offer personalized education experiences that allow employees to learn at their own pace and focus on areas of interest or skill gaps (Smith & Johnson, 2021). Moreover, digital technologies; such as, simulations, gamification and augmented reality enhance engagement and retention of knowledge (Brown & White, 2020). As a result, employees can acquire new knowledge and skills more effectively in order to improve their performance, innovation and adaptability within organizations.

In the United States of America (USA), Smith and Johnson (2021) have highlighted that employee who continuously acquire and update their industry knowledge and technical skills are better equipped to handle complex tasks, adapt to the ever-changing market dynamics, and contribute to innovation and problem-solving within the organization. This acquisition of specialized knowledge enhances employee performance and contributes to overall organizational success. Therefore, the studies above show that the acquisition of industry-specific knowledge and technical skills will improve the quality of the organization.

In the USA and Hongkong-China, Harandi and Berglund (2024) and Kim, Lee and Brown (2021) respectively have shown in their research that employees with strong interpersonal skills and emotional intelligence contribute positively to team collaboration, employee engagement, customer satisfaction and overall organizational productivity. The acquisition of these soft skills fosters a positive work environment, effective communication and cohesive teamwork, which are critical factors for enhancing organizational performance. Therefore, development of the aforementioned skills is significant for the organizational performance.

Falasca, et al. (2017) in the USA and Lee, Brown and Garçia (2019) in Mexico have demonstrated in their studies that organizations that promote a culture of perpetual learning, knowledge exchange and collaboration among employees experience improved performance metrics; such as, innovation, process efficiency, customer service quality and financial performance. This underscores the importance of creating a learning culture that emboldens knowledge acquisition, sharing the best practices, and leveraging collective expertise towards achieving strategic objectives. Therefore, the individual's knowledge and skills through organizational learning and knowledge-sharing processes also impact positively the organizational performance outcomes.

The study conducted by Sichoongwe (2024) in South Africa, focused on investigating the adoption behaviours of digital technologies by manufacturing firms in South Africa. The study employed an econometric model to analyze a total of 516 firms in the manufacturing sector. The study found that the adoption levels of digital technologies in firms was dependent on a number of factors such as the level of digital skills in staff, effectiveness of training programs to equip staff with relevant skills, a digital change adaptive organizational structure, infrastructure modernization, increasing demands from consumers and pressure from competitors. These findings highlight the importance of addressing the skills gap in facilitating onboarding of emerging digital technologies to enhance digital technology adoption. The critical contribution of this study is that it established a nexus between digital skills and

the development of new business models through digital transformation offering new opportunities to deliver value to stakeholders.

In Nigeria Ogundare et al (2023) conducted a cross-sectional survey study that focused on the technology adoption management strategies taken in the telecommunication industry in Nigeria. The study reported that technology innovation, infrastructure modernization and upskilling of staff on digital platforms and tools had a positive impact on organizational performance. These findings emphasize the critical role that acquisition of skills and effective trainings to upskill staff on digital tools play in ensuring the staff are empowered to operate in a highly digitalized environment. The important contribution of this study is the establishment of the effect of digital skills in enabling staff to innovate, develop new products and services that contribute significantly to enhanced organizational performance.

Andriole (2023) asserted that in the USA, the attainment of knowledge and skills acquired at the organizational and individual levels is a critical driver of organizational performance. The knowledge and skills enable employees to contribute effectively, adapt to the changing environments, foster innovation, and ultimately attain sustainable competitive advantages in the marketplace. In this regard, organizations that prioritize and invest in continuous learning, skills development and knowledge-sharing initiatives are destined to earn better results compared to those who do not. Therefore, the findings guide this study to determine the influence of acquisition of knowledge and skills on organizational performance at Wellcome Trust Programme.

2.3.3 Digitized change management approaches and organizational performance

Digitized change management approaches have become increasingly crucial in shaping organizational performance in the digital age. Research has shown that leveraging digital technologies in change management processes can bring about more efficient and effective organizational transformations that can positively impact performance outcomes (Andriole, 2023). A significant aspect is the utilization of digital platforms and tools for collaboration and communication during change initiatives. Studies by Brynjolfsson and McElheran (2016) and Sultana, et al. (2022) have highlighted that organizations that adopt digital communication channels; such as, collaboration software, social intranets and project management tools experience improved information sharing, stakeholder engagement and alignment during change processes. This enhanced communication collaboration

facilitates smoother change implementation, reduce resistance and enhance employee buy-in, which leads to better performance outcomes.

Johnson and Smith (2020) in Canada and Kim, Lee and Brown (2021) in China have shown in their studies that organizations using data analytics for change management can identify Key Performance Indicators (KPIs), monitor progress and optimize change interventions, which lead to successful outcomes and improved organizational performance. Therefore, the integration of data analytics and Artificial Intelligence technologies in change management enables organizations to make data-driven decisions, predict potential risks and customize change strategies based on real-time insights.

In China, Lee, Brown and Garçia (2019) and Garçia and Adams (2023) in the USA have demonstrated in their study that organizations that invest in digital learning initiatives during change initiatives experience higher levels of employee engagement, competence and adaptability, which translate into improved performance metrics; such as, productivity, innovation and customer satisfaction. These studies have portrayed that digital change management approaches encompass the use of online learning platforms and virtual training programs to upskill employees and enhance their readiness for change.

In China, both Wang, Chen and Zhang (2018) and Zhang, Fong and Yamoah (2021) have highlighted in their research study that organizations, which embrace digital transformation in change management achieve greater agility, flexibility and resilience that are essential factors to high performance in dynamic environments. The digital change management approaches, therefore, enable organizations to create agile and responsive structures that can quickly adapt to market changes and capitalize on the emerging opportunities.

The study conducted by Ndemo and Weiss (2017) in Kenya, focused on why some organizations tend to more readily embrace the possibilities offered by digital technologies while others seem disconnected and are lagging behind in technology adoption and application. The study established that the use of digital tools to empower staff to embrace change and integration of digital platforms to facilitate the change plays a key role in improving the adoption rates of technologies and contribute towards having a positive impact of the technologies on organizational performance. This study highlights the critical role that change management plays in ensuring adoption rates are increased and staff are adequately empowered to embrace the changes that are taking place through integration of the digital technologies in improving processes, facilitating creation of new business models and improving market access through use of collaboration platforms.

The above studies depict that digitized change management approaches play crucial roles in enhancing organizational performance through improved communication collaboration, leveraged data analytics for decision-making, upskilled employees and fostered agility and responsiveness. Organizations that effectively integrate digital technologies into their change management strategies are better equipped to navigate change successfully and achieve sustainable competitive advantages. The findings here are applied in this study through evaluating the influence of digitized change management approaches on organizational performance at Wellcome Trust Programme.

2.3.4 Enhanced data-driven decision-making and organizational performance

Decision-making founded on data has a weighty effect on organizational performance across various dimensions. Digital technology adoption has significantly enhanced data-driven decision-making within organizations as it provides advanced analytics tools and platforms that enable more accurate, timely and insightful decision-making processes (Doe, 2020). For example, the integration of data analytics software, Artificial Intelligence (AI), and machine learning algorithms enable organizations to analyze large volumes of data, identify patterns, trends and correlations, and generate actionable insights to inform strategic decisions (Doe, 2020). These digital tools not only automate data processing tasks but also provide predictive and prescriptive analytics capabilities so as to empower decision-makers to anticipate future trends, assess potential outcomes and optimize decision outcomes (Smith & Johnson, 2021). Furthermore, digital technologies enable real-time data monitoring and reporting, and facilitate agile and responsive decision-making in dynamic business environments (Brown & White, 2020). The adoption of digital technology has generally revolutionized data-driven decision-making to the extent of making it efficient, effective and impactful towards organizational success.

Johnson and Smith (2020) in Canada have highlighted in their studies that organizations that adopt data-driven decision-making processes can identify trends, patterns and opportunities that lead to more accurate forecasting, risk mitigation and strategic planning. This proactive approach enables organizations to capitalize on market trends, optimize resource allocation and achieve better performance outcomes. Therefore, a pivotal element is the capacity to render informed decisions founded on predictive analytics and real-time data.

In the USA, Kim, Lee, and Brown (2021) and Garcia and Adams (2023) have demonstrated in their research that organizations using data analytics for performance optimization can identify bottlenecks,

streamline processes, and improve productivity and resource utilization. This results in cost savings, faster time-to-market and higher customer satisfaction, which contribute to overall organizational performance improvement. Therefore, data-driven decision-making enhances operational efficiency and performance optimization.

Lee, Brown and Garcia (2019) in the USA and Wang, Chen and Zhang (2018) in China have depicted that organizations leveraging customer data analytics can modify marketing strategies, services and products to meet individual client preferences and needs. Hence, the data-driven decision-making enables organizations to personalize customer experiences and improve customer satisfaction.

In China, Zhang, Fong and Yamoah (2021), and Sultana, Akter and Kyriazis (2022) in Canada have indicated that organizations using data analytics for innovation management can identify market gaps, assess competitor strategies and prioritize innovation projects based on data-driven insights. This fosters a culture of innovation, accelerates product development cycles and enhances competitive positioning in the market, which contributes to sustained organizational performance improvement. Therefore, the data-driven decision-making supports innovation and strategic growth initiatives.

In India Ranjan et al (2024), conducted a study investigating the influence of emerging technologies on data driven culture and innovation capabilities in firms. The study revealed that data-driven decision making significantly impacted organizational performance by providing a factual foundation for strategic choices. The findings showed that by analyzing vast amounts of data, businesses gained valuable insights into customer behavior, market trends, operational efficiency, and risk factors. This allowed them to make informed decisions that align with their goals, optimize resource allocation, and minimize potential pitfalls. This study highlights the importance of data driven decision making in empowering organizations to identify new opportunities, improve customer satisfaction, enhance operational efficiency, and ultimately achieve sustainable growth and competitive advantage.

The above literature portrays that enhanced data-driven decision-making influences organizational performance as it enables informed decisions, improves operational efficiency, personalizes customer experiences, and drives innovation and strategic growth. Organizations that embrace data analytics and effectively leverage data-driven insights are better positioned to achieve sustainable competitive advantages and excel in today's data-driven competitive landscape. Therefore, the findings are deployed in this study to investigate how enhanced data-driven decision-making influences organizational performance at Wellcome Trust Programme.

2.4 Research Gaps

Previous studies focused on demonstrating the influence of digital technologies on operational efficiency, risk mitigation and cost management. A research gap exists in understanding the specific digital communication channels and collaborative tools that yield the most significant improvements. Johnson and Smith (2020) emphasized the transformative potential of digital communication platforms; such as, social intranets and collaboration software in order to drive organizational performance. However, Lee, et al. (2019) pointed out the need for a comprehensive analysis of effective collaborative technologies in different organizational settings to understand their impact on communication and collaboration effectiveness.

In the realm of skills development and knowledge acquisition, empirical studies have highlighted the importance of continuous learning for enhanced organizational performance. García and Adams (2023) carried out a longitudinal study on the effectiveness of online training programs on employee performance by expressing the impact of learning interventions. Similarly, Wang, Yang and Xue (2017) emphasized the need for further research to explore knowledge acquisition strategies in organizational contexts to enhance employee skills, knowledge and competencies.

Digitized change management approaches present another area with research gaps, especially the understanding of success factors and challenges in implementing digital change initiatives. Ba, et al. (2023) stressed the importance of identifying success factors in digitized change management projects through insights from industry cases. Similarly, Wang, et al. (2021) highlighted the need for comparative analysis to understand the challenges and opportunities associated with digitized change initiatives across different organizational and industrial contexts.

When it comes to enhanced data-driven decision-making, there is a gap in understanding the organizational capabilities required to maximize its impact on performance. Johnson and Smith (2020) emphasized the effect of digital organizational capabilities in enabling effective data-driven decision-making. Furthermore, Kim and Brown (2021) emphasized the importance of ethical considerations and current practices in data analytics and Artificial Intelligence applications as they outline the need for research on ethical challenges in data-driven decision-making processes.

These studies highlight the ongoing research gaps in areas; such as, enhanced communication collaboration, knowledge acquisition and skills development, digitized change management approaches, and enhanced data-driven decision-making. Addressing these gaps through empirical

research can contribute significantly in understanding how they influence organizational performance besides strategic decision-making processes.

In Kenya, research by Kugun (2021) mainly focused on the impact and adoption of technology on operational efficiency, cost management and stimulation of innovation; thus, demonstrating a research gap on the effect of digital technology adoption on organizational performance. This research attests that no studies have been conducted regarding the effects of digital technology adoption on organizational performance with an emphasis on research institutions within the healthcare sector in Kenya. Therefore, research aims at addressing this gap by investigating the effect of digital technology adoption on organizational performance at Wellcome Trust Programme as the case study.

Table 2-1: Summary of Research Gaps

Author	Title	Findings	Research Gaps
Phumzile et al (2021),	Analysis of IT Capability Impact On Organizational Performance	The study revealed that IT capabilities especially communication and collaboration tools had a positive influence on performance when mediating factors such as staff digital skills, adequate IT investment and effective IT outsourcing were in place.	The study focused on the mining sector in South Africa and proposed an IT capability model based on the following aspects; IT architecture, IT infrastructure, IT human resources and IT collaboration resources. The study lacked a holistic approach in evaluating the factors that affected digital technology adoption which is the focus of this study.
Kim and Brown (2021)	Data-driven decision making: The effect of digital analytics and AI in Business.	The study explored ethical considerations in data analytics and AI applications, highlighting current practices and challenges in ethical decision-making.	Addressing ethical challenges in data-driven decision-making processes was not adequately addressed to ensure responsible and sustainable practices are put in place. The impact of data-driven decision making was not explored in relation to its effect on organizational performance which is the focus of this study.
Ashiru et al (2023)	Adapting emerging digital communication	The study focused on exploring how emerging	The study focused on the SME sector in Nigeria and

Author	Title	Findings	Research Gaps
	technologies for resilience: evidence from Nigerian SMEs.	digital communication technologies (EDCT) such as social media and virtual communication technologies affected the small and medium enterprises (SMEs') resilience during the COVID 19 pandemic.	particularly on the resiliency aspect brought about by adopting social media and virtual communication technologies. The study did not investigate the effects of adopting emerging digital technologies on organizational performance which is the focus of this study.
Ndemo and Weiss (2017)	Making Sense of Africa's Emerging Digital Transformation and its Many Futures.	The study established that the use of digital tools to empower staff to embrace change and integration of digital platforms to facilitate the change plays a key role in improving the adoption rates of technologies and contribute towards having a positive impact of the technologies on organizational performance	The study investigated digital transformation and highlighted factors that could potentially affect the adoption rates of technologies amongst firms in Africa. Their study focused on examining factors why some organization adopted technology easily while some struggled with the same. The focus of our study is to examine the effects of digital technology adoption on organizational performance.
Johnson and Smith (2020)	The power of data: How analytics and insights drive business performance.	The research investigated organizational capabilities for effective data-driven decision-making, emphasizing the effect of digital data governance and analytics maturity.	The study focused on data governance and the maturity levels of using analytics in a firm. The study did not focus on data driven decision making to provide insights and knowledge to improve organizational performance which is the focus of this study.
Kim, Lee and Brown (2021)	Data-driven decision making: The effect of digital analytics and AI in Business	The study explored ethical considerations in data analytics and AI applications, highlighting	The study focused on addressing ethical challenges in data-driven decision-making processes

Author	Title	Findings	Research Gaps
		current practices and challenges in ethical decision-making.	examining current practices and the challenges experienced from an ethical standpoint. The impact of data-driven decision making was not explored in relation to its effect on organizational performance which is the focus of this study.

Source: Author (2024)

2.5 Conceptual Framework

The conceptual framework illustrates the expected relationship between the variables under consideration in this study. This model is like a roadmap for the study. It helps in visualizing the research project and putting it into action through defining the relevant variables for the study and how the variables might relate to each other. Jabareen (2009) posits that a conceptual framework is a network, or “a plane” of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena. Mugenda and Mugenda (2020) define conceptual framework as a proposed model that identifies the concept and outlines their relationships. According to Kothari and Garg (2019), conceptual framework is a visual representation of the relationship between the variables of the study that is presented in a diagrammatic format to offer a conceptual structure that is easily comprehensible. This framework depicts the connection between the independent variables; such as, enhanced communication collaboration, acquisition of skills, digitized change management approaches, and enhanced data-driven decision-making and how they affect organizational performance.

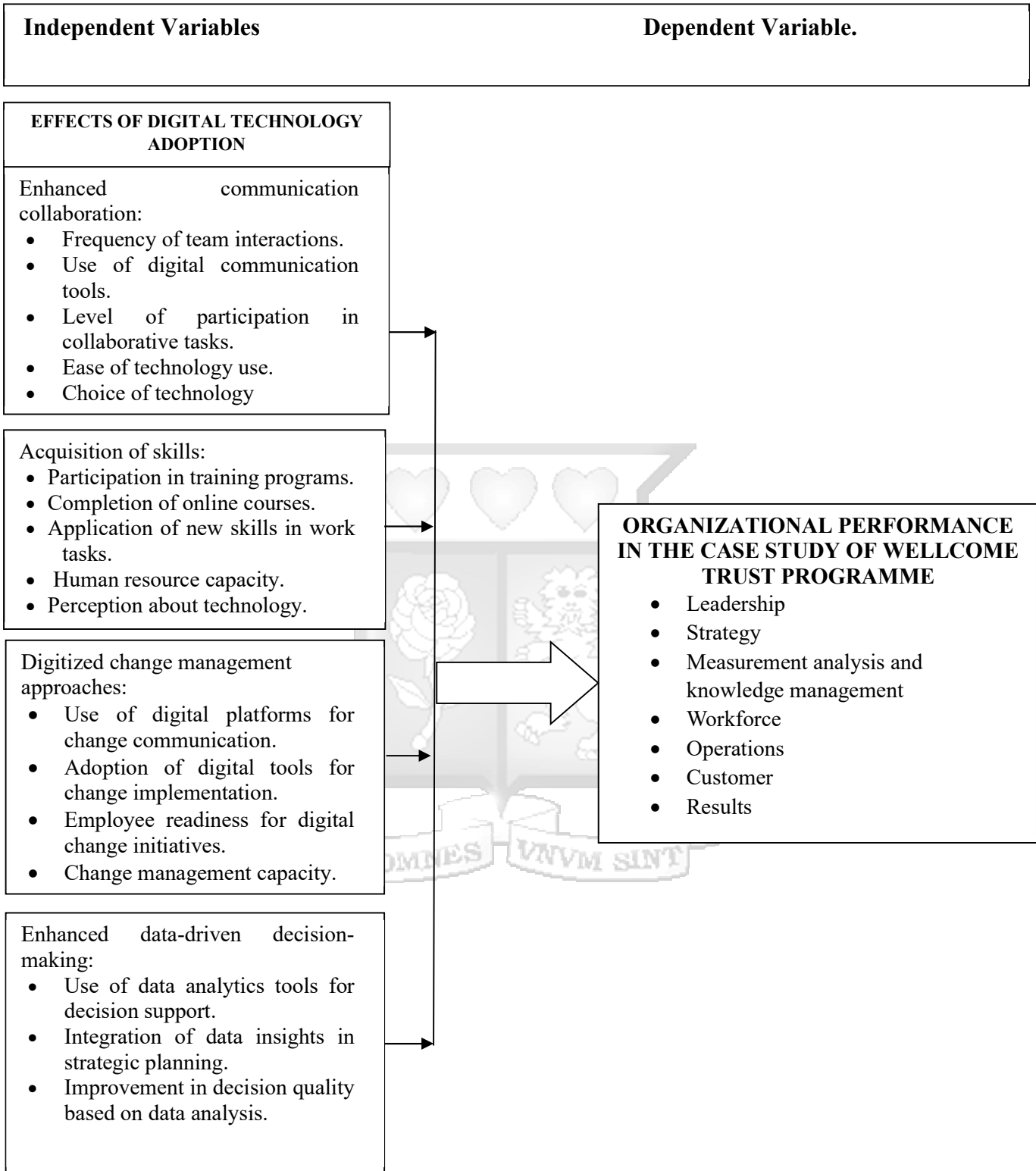


Figure 2-2: Conceptual Framework
Source: Researcher (2024)

2.6 Operationalization of the variables

The formulation of the study variables and operationalization is critical to undertaking any study as it forms the basis for quantitative and qualitative measurements. Operationalization entails transforming the study concepts and theory into measurable variables and identifying the indicators that can allow the quantification of the study variables. The measurement of the variables in this study facilitates quantitative analysis where appropriate and assist in answering the research questions.

2.6.1 Operationalization and measurement of research variables

This table provides a comprehensive view of each study variable. It comprises the specific indicators of independent or dependent variables and how they are measured. The table also indicates the data collection methods to be utilized.

Table 2-2: Operationalization and measurement of research variables

Table	Type of Variable	Indicator	Measurement	Data Collection Method
Enhanced communication collaboration	Independent	<ul style="list-style-type: none"> • Frequency of team interactions. • Use of digital communication tools. • Level of participation in collaborative tasks. • Ease of technology use. • Choice of technology 	Likert Scale	<ul style="list-style-type: none"> • Questionnaires
Acquisition of skills	Independent	<ul style="list-style-type: none"> • Participation in training programs. • Completion of online courses. • Application of new skills in work tasks. • Human resource capacity. • Perception about technology 	Likert Scale	<ul style="list-style-type: none"> • Questionnaires

Table	Type of Variable	Indicator	Measurement	Data Collection Method
Digitized change management approaches	Independent	<ul style="list-style-type: none"> • Use of digital platforms for change communication. • Adoption of digital tools for change implementation. • Employee readiness for digital change initiatives. • Change management capacity. 	Likert Scale	<ul style="list-style-type: none"> • Questionnaires
Enhanced data-driven decision-making	Independent	<ul style="list-style-type: none"> • Use of data analytics tools for decision support. • Integration of data insights in strategic planning. • Improvement in decision quality based on data analysis. 	Likert scale	<ul style="list-style-type: none"> • Surveys or questionnaires on data-driven decision making.
Organizational performance	Dependent	<p>Key Performance Indicators (KPIs) related to:</p> <ul style="list-style-type: none"> • Leadership • Strategy • Measurement analysis and knowledge management • Workforce • Operations • Customer • Results <p>(Source: Baldrige Performance excellence framework)</p>	Likert scale	<ul style="list-style-type: none"> • Questionnaires

Source: (Researcher, 2024)

2.7 Chapter Summary

In the chapter, the theoretical and empirical literature reviews that form the basis of this research have been presented. The relevant theories and frameworks upon which the research is based on are discussed, including the summary of the existing research gaps. The conceptual framework and operationalization of variables have also been outlined.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology of the study. It covers the research philosophy, research design, target population and sampling methods. Data collection methods, instruments and data analysis methods are also discussed here. The chapter also highlights ethical issues that could potentially affect the study. In addition, the research quality factoring in the validity, reliability and objectivity aspects of the research are presented.

3.2 Research Philosophy

The study adopted a positivist philosophy due to its suitability for examining the effect of digital technology adoption on organizational performance in a structured and empirical manner. Positivism emphasizes the use of scientific methods and objective data collection techniques to uncover causal relationships and generalizable patterns of the phenomena. In investigating the effects of digital technology adoption, positivism provided a rigorous framework for gathering quantitative data on technology usage, performance metrics and organizational outcomes. By employing positivist principles, the study aimed at generating reliable and valid findings that can contribute to evidence-based decision-making and practical recommendations for organizations (Smith & Johnson, 2021).

Furthermore, the positivist approach aligned well with the study's objective of identifying specific factors and variables related to digital technology adoption that influence organizational performance. Positivism emphasizes the use of standardized measurement tools, statistical analysis and hypothesis testing. This approach is particularly beneficial in exploring cause-and-effect relationships between digital technology adoption strategies; such as, communication tools, data analytics platforms and collaboration software, including key performance indicators; such as, productivity, innovation and customer satisfaction. By adhering to positivist principles, the study aimed at enhancing the rigour, credibility and generalizability of its findings that make a meaningful contribution to the field of digital technology adoption and organizational performance research (Brown & White, 2020).

3.3 Research Design

A research design is a plan for answering the research questions using empirical data (Mugenda & Mugenda, 2020). The research design is the blue print to guide a researcher on how to answer critical elements of the study. This study contained the following elements: the overall study objectives, type of research design that is appropriate in addressing the research questions, choice of participants, the appropriateness of participants in answering the research questions, data collection methods, and procedures and data analysis strategies. According to Saunders, Lewis and Thornhill (2019), research design refers to the overarching strategy detailing the approach taken to address research questions.

Descriptive design was adopted as the most appropriate research design for the study given its suitability for providing an all-inclusive overview and understanding of the existing state of digital technology adoption space and its influence on organizational performance. This approach aligned well with the study's objective of gaining a holistic understanding of the digital landscape in organizations and identifying patterns or trends in technology adoption practices (Smith & Johnson, 2021).

Moreover, a descriptive design is well-suited for exploring complex relationships and interactions between multiple variables related to digital technology adoption and organizational performance. By using surveys, questionnaires and archival data, researchers can gather rich quantitative data to describe the various facets of technology adoption, including communication tools, collaboration platforms, data analytics capabilities, and digital skills development initiatives. This comprehensive data collection and analysis approach that is inherent in a descriptive design provided valuable insights into the current state of digital technology adoption and its influence on organizational performance; hence, it contributed to a nuanced understanding of these dynamics (Brown & White, 2020).

The research study was conducted between the months of October 2023 to July 2024. This period was adequate to allow for piloting of the research instruments, including electronic administration of the research tools, collection of the feedback, carrying out the analysis of data collected, and finalizing on the thesis write up.

3.3 Population and Sampling

3.3.1 Target Population

Mugenda and Mugenda (2020) posit that a population is an entire group of persons, events or objects that demonstrate common observable features. Saunders, et al. (2019) define target population as the entire set of cases or group members that constitute the primary focus of the research inquiry from

which a sample is drawn. The target population for this study comprised of staff members at Wellcome Trust Research Programme. The population frame included 760 members at Wellcome Trust Research Programme in Kilifi, Mbale, Harar, Bagamoyo and Nairobi according to the HR records of August 2023. (Source: HR manager Welcome Trust Programme, 2024). The table below shows the target population of 760 members of staff and their distribution across various organizational functions.

Table 3-1: Target Population

Category	Total Population
Top Management (EXCOM)	12
ICT Staff	23
HRM staff	11
Finance and Procurement	25
Facilities and Transport	81
Security and Health and Safety	3
Clinical Research Team and Clinical Trials Support team	138
Clinical Services	61
Research Scientists	105
Field Workers and Community Facilitators	134
Laboratory Analysts and Technicians	63
Research Medical Officer and Specialists	11
Communication Management staff	3
Data Management Staff	49
Executive Administrative Assistants and Administrative Assistants	13
Librarian and Archivist	3
Project Management staff	16
Training Staff	9
Total	760

Source: Welcome Trust Programme HR records (August 2023)

3.3.2 Sample Procedures and Sample Size

Saunders, et al. (2019) postulate that, “the size of a sample is determined by factors; such as, the level of confidence required in the data, acceptable margin of error, nature of the analysis to be conducted and size of the target population from which the sample is generated.” In view of this, the study used the stratified random sampling technique to divide the target population into different strata. The strata were based on their roles, decision-making latitude in relation to technology acquisition and adoption, technology usage, and function within the organization. The sample size was calculated using the Yamane’s formula. This statistical formula is used when researchers need to choose a random sample from a large population; and need to calculate the appropriate sample size to ensure the results are statistically meaningful. Below is the formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = desired sample size

N = population size

e = is the margin of error or the desired level of precision and for social sciences the confidence level is 95%; thus, e will be 5% or 0.05

The target population (N) was 760 and the study was conducted at a 95% confidence level, which means the margin of error (e) was 5% (0.05). Using Yamane’s formula, the sample size (n) was calculated as:

$$n = \frac{760}{1 + 760(0.05)^2}$$

$$n = \frac{760}{2.19}$$

$$n = 262.068 \text{ Approximately } 263 \text{ respondents}$$

The desired sample size for each stratum was obtained through proportional allocation and summarized in Table 3.2

Table 3-2: Stratified Sampling Categories

Category	Total Population	Sample Size
Top Management (EXCOM)	12	4
ICT Staff	23	8
HRM staff	11	4
Finance and Procurement	25	9
Facilities and Transport	81	28
Security and Health and Safety	3	1
Clinical Research Team and Clinical Trials Support team	138	48
Clinical Services	61	21
Research Scientists	105	36
Field Workers and Community Facilitators	134	46
Laboratory Analysts and Technicians	63	22
Research Medical Officer and Specialists	11	4
Communication Management staff	3	1
Data Management Staff	49	17
Executive Administrative Assistants and Administrative Assistants	13	5
Librarian and Archivist	3	1
Project Management staff	16	5
Training Staff	9	3
Total	760	263

Source: Researcher (2024)

Saunders, et al. (2019) state that the selection of cases should be guided by the investigator's judgment to ensure that they are best suited in addressing the research questions and achieving the research objectives when using purposive sampling. Purposive sampling was used and allowed the researcher to focus on specific subgroups within the population that assisted in gaining in-depth understandings into the specific phenomenon being studied. Purposive sampling is useful, especially in cases where

the samples are small and one needs to identify cases that are predominantly informative in responding to the study objectives.

3.4 Data Collection Methods

The questionnaire was utilized as the main data collection instrument in this study. This was used for collection of primary quantitative data. The use of questionnaire is informed by the potential to access a large number of respondents, geographical spread of the respondents, allowing respondents enough time to respond to the questionnaire, providing a sense of confidentiality to the respondents, and allowing the respondents to offer responses that are honest and accurate. This method also eliminated the researcher's subjectivity by allowing respondents to provide truthful feedback while maintaining confidentiality of respondents' identity.

The questionnaire was pilot tested before actual data collection from participants with similar attributes. This aided in fine-tuning the questionnaire to confirm that respondents did not encounter difficulties in answering questions; hence, facilitating accurate data recording. According to Saunders, et al. (2019), pilot testing allows the investigator to assess the validity of the questions and the potential reliability of the data to be collected. This applies for both individual questions and scales consisting of multiple questions.

The questionnaire was divided into various parts: the first portion captured demographic information of respondents while the other portion was organized to capture the feedback that tackled the research objectives besides answering in detail the research questions. Some sections were captured in themes that are appropriate to the objectives of the study so that the study can get deeper insights from the data collected.

3.5 Research Quality

This study made use of reliability, validity and objectivity tests to ensure the research methods and findings are reliable, valid and objective in responding to research questions and consequently addressing the research objectives that were considered in the study.

3.5.1 Reliability

As outlined by Saunders, et al. (2019), reliability is characterized by the extent to which methods of data collection yield uniform results, similar observations, or conclusions that coincide with those of other researchers. Alternatively, reliability is demonstrated when there is clarity in the process of

extracting significance from raw data. Creswell and Plano (2018) posit that reliability signifies the extent to which a measurement consistently yields identical outcomes for the same individual, among comparable groups, and regardless of who conducts the assessment or gathers the data. In simpler terms, it reflects the degree to which an evaluation or other measurement tool generates steady and uniform results.

The study made use of different research assistants located across the geographical areas where the study was being undertaken. It also ensured that the questionnaires were administered electronically for consistency and wide reach. Data collection and analysis was conducted in various locations in order to necessitate the consistency and correctness of data.

3.5.2 Validity

The validity of research instruments refers to how effective they are in measuring the variables being investigated in the study. According to Kothari (2013), validity of a study determines if the respondents perceived the research questions the way they were intended by the investigator. Mugenda and Mugenda (2020) state that, “validity is the accuracy and meaningfulness of inferences, which can be attributed to the research findings.” Moreover, validity can be understood as the degree of precision to which results obtained from findings and analysis of the data actually represent the variables being investigated in the study.

To ensure content validity, the questionnaire was subjected to piloting to ensure reliability and relevance of the content in relation to the variables under investigation. Additionally, content validity was guided by the expert advice from the supervisor during the period of the study. The instruments were refined to align to the feedback received from the pilot study as well as from the supervisor in order to confirm that the instruments met the needs of the research objectives.

The pilot study for the questionnaire checked for understanding of the questions, complexity of language used, clarity and logical sequencing of the questions. The pilot enabled the researcher to accurately estimate the time required for all the questions to be comfortably answered to by the respondents. The feedback from the pilot study was used to correct and clarify any questions that did not make contextual, logical or linguistic sense.

3.5.3 Objectivity

For the objectivity criteria to be met, the investigator conducted piloting of the questionnaire. This enabled the questions to be refined so that they are clear and easily understood by the intended respondents. Ambiguities were addressed through piloting by ensuring the questions were valid and consistent with the research objectives.

The questionnaires were administered electronically to address the issue of geographical dispersion of respondents and for cases where there was need to administer manually. Research assistants at the various locations where the study was undertaken did this in order to remove any bias that could have been attributed to the investigator's personal opinions. This facilitated the process of data collection to be free of any bias from the investigator; hence, enabling accurate and complete data to be collected for further analysis.

3.6 Data Analysis

Cooper and Schindler (2011) postulated that data analysis encompasses a process of condensing and arranging data into a manageable format, crafting summaries, identifying patterns, developing themes, and employing suitable techniques for analysis. This study made use of quantitative approach. After receiving completed questionnaires, the researcher first ensured they were complete and internally consistent. Subsequently, data cleanup entailed editing, coding, as well as tabulating the responses to identify any anomalies and assign numerical values for further analysis.

Subsequently, the data underwent analysis by employing descriptive statistics using SPSS. Thereafter, data were analyzed and interpreted in the mean score, frequencies, percentages and standard deviation. The findings were showcased through tables and graphs, aiding in additional examination and enabling comparative analysis. This method produced quantitative reports via percentages, tabulations and measures of central tendency. In addition, the researcher also conducted an inferential statistic to understand the in-depth correlation between the variables. In this, the analysis were based on correlation, regression and Analysis of Variance (ANOVA) as explained below. Inferential approach enabled us to find out the nature and degree of association between the variables being examined in the study. This helped to establish the direction of the relationship amongst the variables considered in this study and the tests were carried out at 95% confidence interval (p is less than 0.5).

3.6.1 Correlation Analysis

Correlation analysis is a statistical method used to evaluate the strength and direction of the relationship between two or more variables under investigation (Cooper & Schindler, 2011). This

method measures the extent to which changes in one variable are associated with changes in another variable. This analysis was relevant as it aided the researcher to explore connections between variables and to detect patterns and trends in data. Correlation analysis uses the correlation coefficient as the main measure, which quantifies the strength and direction of the relationship between variables (Hair, Black, & Babin, 2010). The correlation coefficient, denoted by r , ranges from -1 to 1.

A correlation coefficient of 0 signifies the absence of any relationship between the variables. A correlation coefficient of 1 denotes a perfect positive correlation as it indicates that one variable increases when the other variable also increases in direct proportion. Conversely, a coefficient of -1 signifies a perfect negative correlation, which means that an increase in one variable results in a proportional decrease in the other variable.

3.6. 2 Multiple Regression Analysis

Hair, et al. (2010) posits that multiple regression analysis is a statistical technique used to examine the relationship amongst a dependent variable and two or more independent variables concurrently. In this research, the employed multiple regression analysis established whether there was a significant relationship between the dependent and independent variables. This method was suitable as it allowed assessment of the complex relationship between multiple variables and the causal relationships. The regression equation below guided the study:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Where:

Y: Organizational performance at Wellcome Trust Programme

X₁: Enhanced communication and collaboration

X₂: Acquisition of knowledge and skills

X₃: Digitized change management approaches

X₄: Enhanced data driven decision-Making

b₀ will be the constant of the equation; whereas, **b₁, b₂, b₃ b₄ and b₅** will be the regression coefficients, **e** is the margin of error in the equation.

3.6.2.1 Diagnostic Tests

3.6.2.1.1. Multicollinearity

Multicollinearity is the testing of the assumption that the relationship between the independent variables (predictors) and the dependent variable (outcome) is linear (Raheem, Udoh, & Gbolahan, 2019). This test was used to determine whether the predictors in the regression model were moderately or highly correlated. Multicollinearity was tested using the variance inflation factor (VIF) according to Farar and Glauber (1967) where $VIF \geq 10$ indicates presence of multicollinearity.

3.6.2.1.2. Normality Tests

Normality tests are essential for assessing the validity of regression models because they ensure the reliability of statistical inferences. In regression analysis, the assumption is that the differences between observed and predicted values are normally distributed (Saunders, Lewis, & Thornhill, 2016). This particular test helps to ensure the robustness of the model's inferences and reduces the impact of outliers or extreme values. The research adopted Shapiro Wilk and Kolmogorov Smirnov tests. If the sample is normally distributed, the population would be normally shaped and one would assume normality in the study data (Saunders, Lewis, & Thornhill, 2019).

3.6.2.1.2. Autocorrelation Tests

This test was used to check the assumption of independence of errors in the regression model and the assumption states that the differences between observed and predicted values should be independent of each other. Autocorrelation occurs when the observed and predicted values are correlated, meaning that the value of one is related to the value of another (Saunders, Lewis, & Thornhill, 2019). The study adopted the Durbin Watson test and the criteria used to test for independence of observations were scores between 1.5 and 2.5.

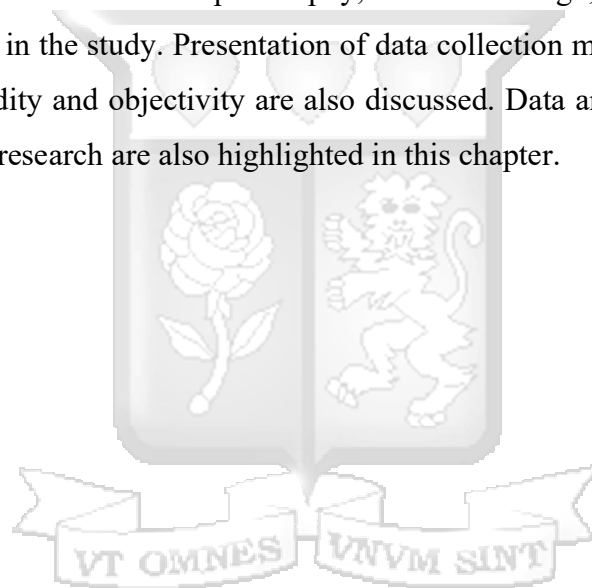
3.7 Ethical Issues

The respondents were informed by the researcher that the study was for academic purposes only and participation was on voluntary basis. The respondents were made aware of what the study is about, including the potential risks and benefits. They were made aware that prior to their involvement in the study, consent was sought. Additionally, they were informed that they were allowed to withdraw their participation at any point from the study. The researcher did not coerce any respondent to take part as the study aimed at acquiring honest and accurate responses.

The study also ensured strict adherence to confidentiality and anonymity of the information in compliance with the Data Protection Act of 2019 and its subsequent regulations of 2022. Respondents were assured that the information they presented throughout the period of the study was to be used only for academic research purposes. Findings of the study were presented factually and objective discussions were carried out. Prior to commencement of the study, an introduction letter was sought from Strathmore University. An ethical clearance was sought from the Strathmore University ethical review committee as well as NACOSTI study permit to ensure that the researcher had the required permissions and approval to carry out the study.

3.8 Chapter Summary

This chapter has presented the research philosophy, research design, population and sampling techniques, which are used in the study. Presentation of data collection methods and research quality in terms of reliability, validity and objectivity are also discussed. Data analysis methods and ethical issues that could affect the research are also highlighted in this chapter.



CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the analysis and interpretation of the data collected during the study through the use of questionnaires.

4.2 Response Rate

The study had a sample size of 263 respondents determined using Yamane's formula. The number of respondents to the study were determined to be 221. The findings are presented in Table 4.1 below:

Table 4-1: Study Response Rate

Category	Total Population	Sample Size	Response Rate
Top Management (EXCOM)	12	4	4
ICT Staff	23	8	11
HRM staff	11	4	6
Finance and Procurement	25	9	8
Facilities and Transport	81	28	20
Security and Health and Safety	3	1	2
Clinical Research Team and Clinical Trials Support team	138	48	31
Clinical Services	61	21	16
Research Scientists	105	36	31
Field Workers and Community Facilitators	134	46	36
Laboratory Analysts and Technicians	63	22	20
Research Medical Officer and Specialists	11	4	4
Communication Management staff	3	1	1
Data Management Staff	49	17	13
Executive Administrative Assistants and Administrative Assistants	13	5	6
Librarian and Archivist	3	1	1

Project Management staff	16	5	9
Training Staff	9	3	2
Total	760	263	221
Response Rate in %	$(221/263) * 100 = 84.03 \%$		

Source: Researcher (2024)

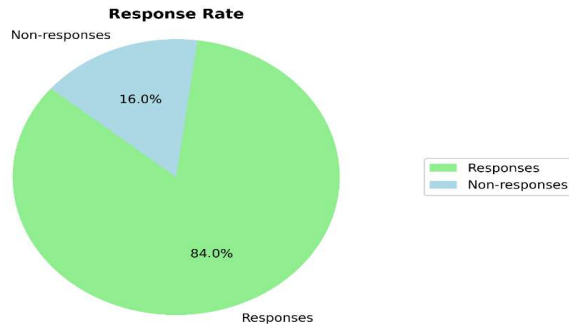


Figure 4-1: Study Response rate

(Source: Researcher, 2024)

Table 4.1 above indicates the overall study response rate at 84.03 %, which translates to 221 respondents. The figure presents the response rate per each category of staff. Figure 4.1 shows the summary of the study response rate in form of a pie chart depicting a response rate of 84.03%.

4.3 Background information of the respondents

The responses obtained indicate that 54.3% were of the female gender while 45.7% were from the male gender respectively.

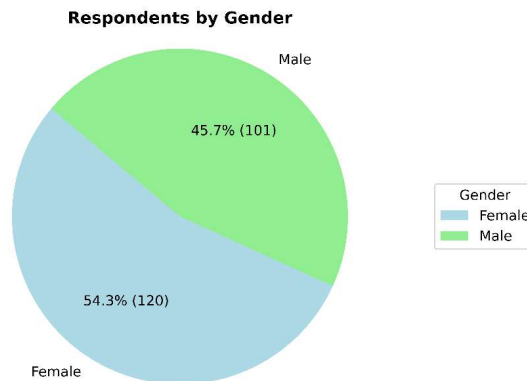


Figure 4-2: Respondents by Gender

(Source: Researcher, 2024)

In terms of age group, the majority of the respondents 71.9% were in the 29 to 39 years age group. 20.8%, 5.9% and 1.4% of the respondents were in the 40 to 50 years, 18 to 28 years and 51 to 61 years age groups respectively.

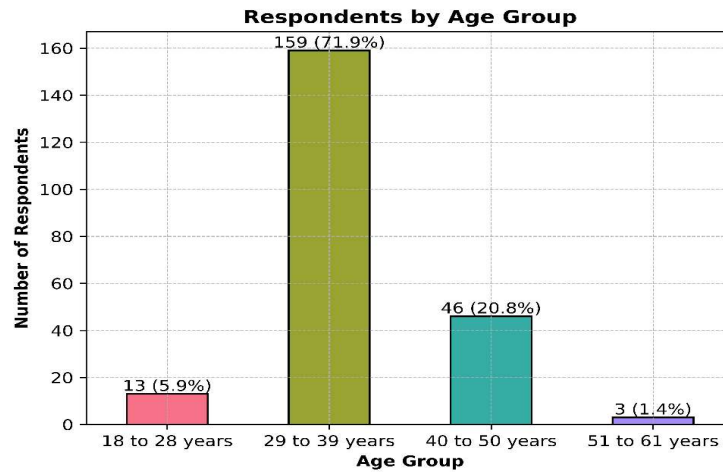


Figure 4-3: Respondents by Age Group

(Source: Researcher, 2024)

The study also established the respondents by both age groups and gender. Figure 4.4 presents the results of the gender spread per age group. The age group of 18 to 28 years had a gender spread of 4 males and 9 females, while the majority of the respondents were of the age group of 29 to 39 years having a gender spread of 69 males and 90 females. The next age group of 40 to 50 years had a gender spread of 25 males and 21 females, while the age group of 51 to 61 years only had 3 males.

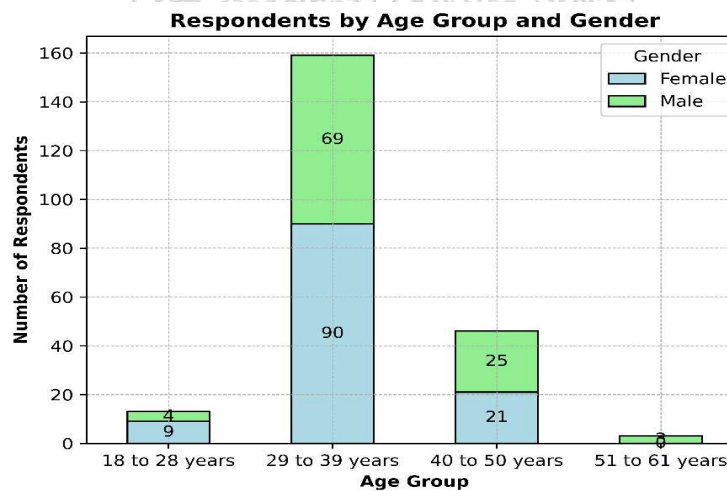


Figure 4-4: Respondents by age group and gender

(Source: Researcher, 2024)

The bar graph below (Figure 4.5) presents respondents by educational level covering Diploma, undergraduate, masters and doctorate. From the graph, majority 127 (57.5%) of the respondents have undergraduate degrees followed by master’s degree holders at 59 (26.7%). Diploma and Doctorate holders follow with 18 (8.1%) and 17 (7.7%) respectively.

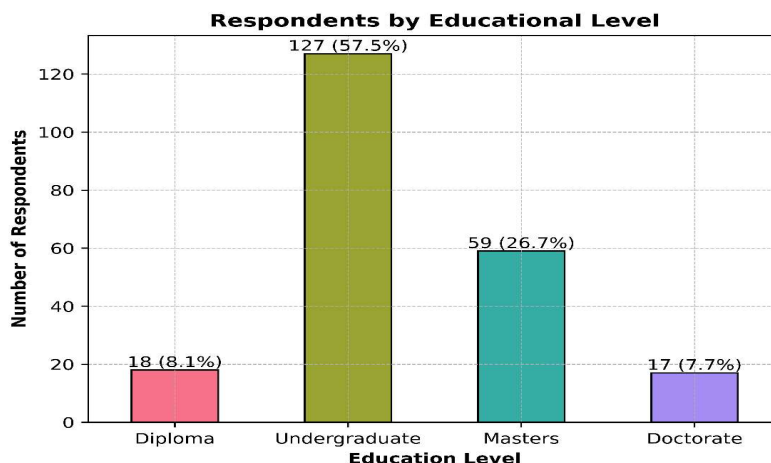


Figure 4-5: Respondents by Educational Level

(Source: Researcher, 2024)

Figure 4.6 below presents the breakdown of each educational category by gender. From the respondents, majority (both male and female) have undergraduate education at 50 and 77 respectively. Masters’ degree holders follow at 24 and thirty-five 35 for males and females respectively. The male respondents have more doctorate holders at 12 compared to 5 for the females. Lastly, the male respondents have more diploma holders at 15 compared to 3 for the female respondents.

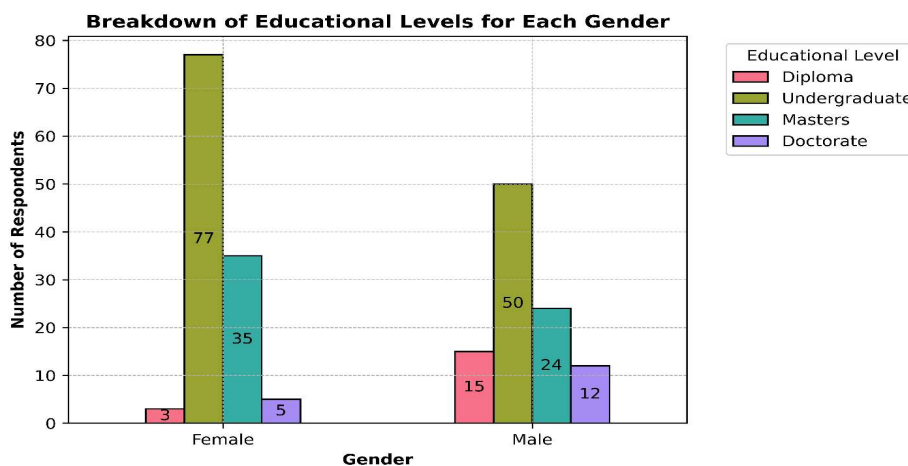


Figure 4-6: Breakdown of educational levels for each gender

(Source: Researcher, 2024)

The Figure 4.7 below shows the respondents based on the employment status. 214 respondents are employed on contract basis while 7 are employed on permanent and pensionable terms. This data translates to 96.8% and 3.2% for contract staff, and permanent and pensionable respectively.

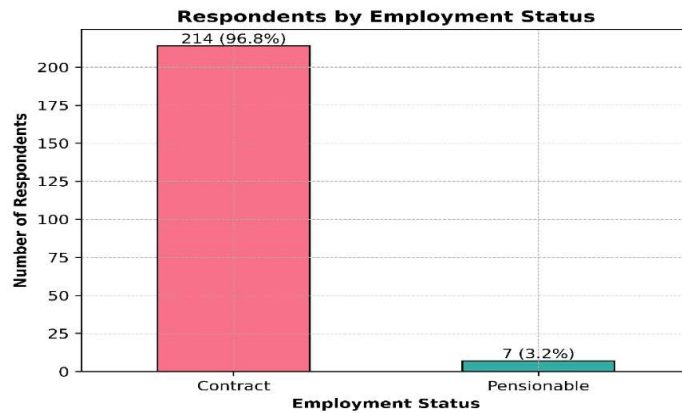


Figure 4-7: Respondents by Employment Status

(Source: Researcher, 2024)

Figure 4.8 below presents the data of respondents by the job categories at Wellcome Trust Programme. The figure shows the spread of respondents per job categories as: field workers and community facilitators (16.3%), research scientists (14%), clinical research team and clinical trials support team (14%), facilities and transport (9%), laboratory analysts and technicians (9%), clinical services (7.2%), and data management (5.9%) and ICT staff at 5%. Other respondents that have less than 5% are also shown in the figure.

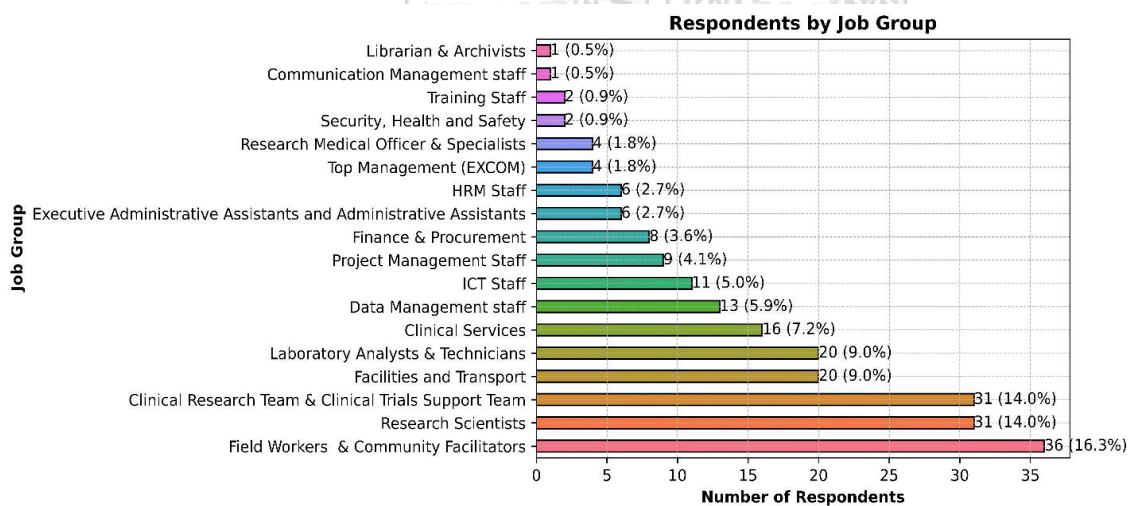


Figure 4-8: Respondents by Job Group

(Source: Researcher, 2024)

4.4 Descriptive analysis of Independent Variables

This section presents the descriptive analysis of findings based on the objectives of the study, which is to investigate the effect of digital technology adoption on organizational performance in the case study of Wellcome Trust Programme.

4.4.1 Enhanced communication collaboration and organizational performance

a) Frequency analysis and percentages

The study sought to obtain the respondents' views on different aspects of enhanced communication collaboration effect on organizational performance. The study found that 70.136% and 9.049% agreed and strongly agreed respectively that effective communication channels within the organization significantly contribute to overall performance outcomes, while 4.524% and 15.837% disagree and uncertain respectively. When these two are added together, it implies that majority (79.185%) of the respondents believe effective communication channels within the organization significantly contribute to overall organizational performance.

Most respondents (92.76%) agreed that collaborative teamwork and coordination led to improved organizational performance, 5.429% strongly agreed, while 1.809% were uncertain. This implied that more than three quarters of the respondents gave a positive response. 86.42% of the respondents agreed that clear and transparent communication enhanced employee productivity positively; thus, impacting organizational performance, 3.619% strongly agreed, while 9.95% were uncertain. This implied that more than three quarter of the respondents gave a positive response.

In addition, 60.18% of the participants agreed that the organization fostered a culture of open communication, which was correlated with better performance metrics, 1.357% strongly agreed, 33.484% were uncertain while 4.97% disagreed. This implied that more than half of the respondents gave a positive response. Furthermore, 77.83% of the respondents agreed that collaborative decision-making processes resulted in more innovative solutions and better organizational performance, 1.809% strongly agreed, 18.552% were uncertain, while 1.809% disagreed.

Most respondents (93.21%) agreed that employees who feel empowered to share ideas and feedback contributed positively to our organization's performance, 2.715% strongly agreed while 4.072% were uncertain. This implied that more than three quarters of the respondents gave a positive response. 94.57% of the respondents agreed that effective communication tools and platforms facilitate seamless

collaboration that led to enhanced organizational performance, 2.715% strongly agreed while 2.715% were uncertain. This implied that more than three quarter of the respondents gave a positive response.

In addition, 86.88% of the participants agreed that everyone in the organization had access to technology platforms to undertake their duties and promote effective communication within the organization, 1.81 % strongly agreed, 8.59% responded with uncertainty, while 2.715% disagreed. This implied that more than three quarter of the respondents gave a positive response. Further, 73.3% of the respondents agreed that the organization allocated adequate funding for technology initiatives, 0.905% strongly agreed, 21.72% were uncertain while 4.072% disagreed.

Lastly, 72.39% of the participants agreed that the organization had adequate ICT infrastructure in place to support business operations, 23.98% were uncertain, 3.17% disagreed, while 0.45% strongly disagreed. The findings are presented in the table below.

Table 4-2: Enhanced communication collaboration

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
Effective communication channels within our organization significantly contribute to overall performance outcomes.	Frequency (f)	20	155	35	10	0	221
	Percentage (%)	9.049	70.136	15.837	4.524	0.00	100.00
Collaborative teamwork and coordination lead to improved organizational performance.	Frequency (f)	12	205	4	0	0	221
	Percentage (%)	5.429	92.76	1.809	0.00	0.00	100.00
Clear and transparent communication enhances employee productivity, positively impacting organizational performance.	Frequency (f)	8	191	22	0	0	221
	Percentage (%)	3.619	86.42	9.95	0.00	0.00	100.00
Our organization fosters a culture of open communication, which is correlated with better performance metrics.	Frequency (f)	3	133	74	11	0	221
	Percentage (%)	1.357	60.18	33.484	4.97	0.000	100.000
Collaborative decision-making processes result in	Frequency (f)	4	172	41	4	0	221

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
more innovative solutions and better organizational performance.	Percentage (%)	1.809	77.83	18.552	1.809	0.00	100.00
Employees who feel empowered to share ideas and feedback contribute positively to our organization's performance.	Frequency (f)	6	206	9	0	0	221
	Percentage (%)	2.715	93.21	4.072	0.00	0.00	100.00
Effective communication tools and platforms facilitate seamless collaboration, leading to enhanced organizational performance.	Frequency (f)	6	209	6	0	0	221
	Percentage (%)	2.715	94.57	2.715	0.00	0.00	100.00
Everyone in the organization has access to technology platforms to undertake their duties and promote effective communication within the organization.	Frequency (f)	4	192	19	6	0	221
	Percentage (%)	1.81	86.88	8.59	2.715	0.00	100.00
The organization allocates adequate funding for technology initiatives.	Frequency (f)	2	162	48	9	0	221
	Percentage (%)	0.905	73.3	21.72	4.072	0.00	100.00
The organization has the adequate ICT infrastructure in place to support business operations.	Frequency (f)	0	160	53	7	1	221
	Percentage (%)	0.00	72.39	23.98	3.17	0.45	100

b) Descriptive statistics of enhanced communication collaboration and organizational performance

The study's objective was to describe how enhanced communication collaboration influence organizational performance. Respondents were asked to express their degree of agreement or disagreement by responding to statements on a five-point Lickert scale. The data was then analyzed using the mean and standard deviations. The interpretation of the mean was as follows: 1-1.9 strongly agree, 2-2.9 agree, 3-3.9 uncertain, 4-4.9 disagree and 5 strongly disagree. Table 4.3 summarizes the findings.

Table 4-3: Descriptive statistics of enhanced communication collaboration

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
Effective communication channels within our organization significantly contribute to overall performance outcomes.	2.1629	2	2	0.63294	0.401	1	4
Collaborative teamwork and coordination lead to improved organizational performance.	1.9593	2	2	0.23963	0.057	1	3
Clear and transparent communication enhances employee productivity, positively impacting organizational performance	2.0594	2	2	0.34686	0.12	1	3
Our organization fosters a culture of open communication, which is correlated with better performance metrics.	2.4326	2	2	0.59896	0.359	1	4
Collaborative decision-making processes result in more innovative solutions and better organizational performance.	2.2103	2	2	0.47242	0.223	1	4
Employees who feel empowered to share ideas and feedback contribute positively to our organization's performance.	2.0093	2	2	0.23662	0.056	1	3
Effective communication tools and platforms facilitate seamless collaboration, leading to enhanced organizational performance.	2	2	2	0.19069	0.036	1	3
Everyone in the organization has access to technology platforms to undertake their duties and promote effective	2.1131	2	2	0.40548	0.164	1	4

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
communication within the organization.							
The organization allocates adequate funding for technology initiatives.	2.2837	2	2	0.53692	0.288	1	4
The organization has the adequate ICT infrastructure in place to support business operations.	2.2896	2	2	0.52857	0.279	2	5

The study findings from Table 4.3 showed that majority of the respondents agreed to the statements that were put forward to them with the exception of statement two where they strongly agreed that team work and collaboration leads to improved organizational performance. The lower the mean scores the higher the degree of agreement that is expressed with each statement.

Mode: - Most of the respondents agreed that enhanced communication collaboration (Mode =2) has an influence on organizational performance.

c) Correlation between enhanced communication collaboration and organizational performance

The first objective sought to examine the effect of enhanced communication collaboration on organizational performance.

Table 4-4: Correlation analysis of enhanced communication collaboration

			Enhanced Communication Collaboration	Organizational performance
Spearman's rho	Enhanced Communication Collaboration	Correlation Coefficient	1.000	.383**
		Sig. (2-tailed)	.	.000
		N	221	221
** Correlation is significant at the 0.01 level (2-tailed)				

The findings of the analysis showed that enhanced communication collaboration had a moderate positive and significant association with organizational performance ($\rho=.383$, Sig = $.000<.005$). The results imply that there is a noticeable relationship between enhanced communication collaboration and organizational performance denoting that as one variable increases, the other variable also tends to increase although the relationship is not very strong. The correlation is meaningful and unlikely to have occurred by chance, suggesting a real relationship between the variables.

d) Regression between enhanced communication collaboration and organizational performance

Null Hypothesis (H_{01}): -There is no statistically significant effect of enhanced communication collaboration on the organizational performance. Model Summary for enhanced communication collaboration and organizational performance.

Table 4-5: Model summary for enhanced communication collaboration

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.417 ^a	.174	.170	.13660
a. Predictors: (Constant), Enhanced communication collaboration				

The regression results presented above indicate that enhanced communication collaboration (Independent Variable) causes 17.4% ($R^2 = 0.174$) change in the organizational performance (Dependent Variable) at Wellcome Trust Programme.

e) ANOVA Summary for enhanced communication collaboration and organizational performance

Table 4-6: ANOVA result for enhanced communication collaboration

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.847	1	.847	45.368	.000 ^b
	Residual	4.012	220	.019		
	Total	4.858	221			

- a. Dependent Variable: Organizational performance
- b. Predictors: (Constant), Enhanced communication collaboration

The study further sought to examine the statistical significance of the research model. The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis indicated that there is no significant relationship between enhanced communication collaboration and organizational performance at Wellcome Trust Programme. The ANOVA results showed an F value of 45.368 with a significance value of .000, which is less than .005, hence the null hypothesis of the study is rejected. The study concludes that there is a significant relationship between enhanced communication collaboration (independent variable) and the organizational performance (dependant variable).

f) Regression coefficients for enhanced communication collaboration and organizational performance

Table 4-7: Regression coefficients for enhanced communication collaboration

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.367	.102		13.349	.000
	Enhanced Communication Collaboration	.319	.047	.417	6.736	.000
a. Dependent Variable: Organizational performance						

The research further sought to examine the significance of the relationship between enhanced communication collaboration and organizational performance, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients were subjected to further t-tests. The null hypothesis holds that, beta (β) = 0, that is, there is no statistically significant relationship between enhanced communication collaboration and organizational performance.

$$Y = 1.367 + 0.417X_1 + 0.102$$

The results above indicate that a constant $\alpha = 1.367$ is significantly different from 0 since the p-value $.000 < .005$. The beta value is $(\beta) = .417$ and is significantly different from 0 since the p-value $.000 < .005$. This indicates that there is a statistically significant positive effect of enhanced communication collaboration on the organizational performance. A unit change in enhanced communication collaboration will result in a .417 unit change in the organizational performance at Wellcome Trust Programme.

4.4.2 Acquisition of skills and organizational performance

a) Frequency analysis and percentages

The study sought to obtain the respondents' views on different aspects of acquisition of knowledge and skills effect on organization's performance. The study found that 69.68% of the respondents agreed that the acquisition of new skills was essential for improving the organization's overall performance, 11.31% strongly agreed, 14.03% were uncertain, while 5.43% disagreed. 70.13% agreed that employees who actively sought opportunities to learn and develop new skills contributed positively to the organization's performance, 2.26% strongly agreed, 25.79% were uncertain, while 1.81% disagreed. Additionally, 65.16% agreed that the organization invests sufficient resources in training programs to enhance employee knowledge and skills that lead to improved performance outcome, 23.53% uncertain, 10.86% disagreed, while 0.45% strongly disagreed.

The study also found that 94.12% of the respondents agreed that the continuous development of employee competencies through training programs positively impacted the organizational performance, 2.26% strongly agreed, while 4.07% were uncertain. 90.95% agreed that employees who demonstrated a high level of expertise and skills were more effective in driving organizational performance improvements, 2.26% strongly agreed, while 6.79% uncertain. In addition, 94.12% of the respondents agreed the ability to adapt and learn new skills quickly as a factor in our organization's success and performance, 3.17% strongly agreed and 2.71% were uncertain.

Furthermore, the study also found that 88.68% of the respondents agreed that employees who received regular training and development opportunities felt more motivated and engaged, which resulted in better organizational performance, 1.81% strongly agreed, while 9.5% were uncertain. Lastly, 91.85% agreed that the management provided adequate support and leadership for technology initiatives that support business operations, 4.52% strongly agreed, while 3.62% were uncertain. The table below shows these findings.

Table 4-8: Acquisition of Skills

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
The acquisition of new skills is essential for improving our organization's overall performance.	Frequency (f)	25	154	31	12	0	221
	Percentage (%)	11.31	69.68	14.03	5.43	0	100
Employees who actively seek opportunities to learn and develop new skills contribute positively to our organization's performance.	Frequency (f)	5	155	57	4	0	221
	Percentage (%)	2.26	70.13	25.79	1.81	0	100
Our organization invests sufficient resources in training programs to enhance employee knowledge and skills, leading to improved performance outcomes.	Frequency (f)	0	144	52	24	1	221
	Percentage (%)	0	65.16	23.53	10.86	0.45	100
The continuous development of employee competencies through training programs positively impacts our organizational performance metrics.	Frequency (f)	5	208	9	0	0	221
	Percentage (%)	2.26	94.12	4.07	0	0	100
Employees who demonstrate a high level of expertise and skills are more effective in driving organizational performance improvements.	Frequency (f)	5	201	15	0	0	221
	Percentage (%)	2.26	90.95	6.79	0	0	100
The ability to adapt and learn new skills	Frequency (f)	7	208	6	0	0	221

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
quickly is a key factor in our organization's success and performance.	Percentage (%)	3.17	94.12	2.71	0	0	100
Employees who receive regular training and development opportunities feel more motivated and engaged, resulting in better organizational performance.	Frequency (f)	4	196	21	0	0	221
	Percentage (%)	1.81	88.68	9.50	0	0	100
The acquisition of new knowledge and skills is essential for improving our organization's overall performance.	Frequency (f)	8	206	6	1	0	221
	Percentage (%)	3.62	93.21	2.71	0.45	0	100
The management provides adequate support and leadership for technology initiatives that support business operations.	Frequency (f)	10	203	8	0	0	221
	Percentage (%)	4.52	91.85	3.62	0	0	100

b) Descriptive statistics of acquisition of skills and organizational performance

The study’s objective was to describe how acquisition of skills influence organizational performance. Respondents were asked to express their degree of agreement or disagreement by responding to statements on a five-point Likert scale. The data was then analyzed using the mean and standard deviations. The interpretation of the means was as follows: 1-1.9 strongly agree, 2-2.9 agree, 3-3.9 uncertain, 4-4.9 disagree and 5 was strongly disagree. Table 4.9 summarizes the findings.

Table 4-9: Descriptive Statistics of Acquisition of skills

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
The acquisition of new skills is essential for improving our organization's overall performance.	2.1449	2	2	0.666	0.444	1	4
Employees who actively seek opportunities to learn and develop new skills contribute positively to our organization's performance.	2.2648	2	2	0.50064	0.251	1	4
Our organization invests sufficient resources in training programs to enhance employee knowledge and skills, leading to improved performance outcomes.	2.4384	2	2	0.69043	0.477	2	5
The continuous development of employee competencies through training programs positively impacts our organizational performance metrics.	2.0228	2	2	0.20189	0.041	1	3
Employees who demonstrate a high level of expertise and skills are more effective in driving organizational performance improvements.	2.0514	2	2	0.27777	0.077	1	3
The ability to adapt and learn new skills quickly is a key factor in our organization's success and performance.	2	2	2	0.21418	0.046	1	3

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
Employees who receive regular training and development opportunities feel more motivated and engaged, resulting in better organizational performance.	2.0884	2	2	0.30047	0.09	1	3
The acquisition of new knowledge and skills is essential for improving our organization's overall performance.	2.0093	2	2	0.25501	0.065	1	4
The management provides adequate support and leadership for technology initiatives that support business operations.	1.9954	2	2	0.26227	0.069	1	3

The study findings from table 4.9 showed that majority of the respondents on average agreed with the statements that they were asked, while the respondents strongly agreed with the last statement, which indicated that the management provided adequate support and leadership to support the technology initiatives. The lower the mean scores the more agreement expressed with each statement.

Mode: - Most of the respondents agree that acquisition of skills (Mode =2) has an influence on organizational performance.

c) Correlation analysis between acquisition of skills and organizational performance

The second objective sought to examine the effect of acquisition of skills on organizational performance.

Table 4-10: Correlation analysis between acquisition of skills

		Acquisition of knowledge and skills	Organizational performance
Spearman's rho	Correlation Coefficient	1.000	.171*

	Acquisition of knowledge and skills	Sig. (2-tailed)	.	.012
		N	221	221
**. Correlation is significant at the 0.01 level (2-tailed).				

The findings of the analysis showed that acquisition of skills had a weak positive and significant association with organizational performance ($p=.171$, $\text{Sig} = .012 > .005$). The results imply that there is a weak noticeable relationship between acquisition of skills and organizational performance. Although the correlation is weak, it is still meaningful enough to suggest that the two variables are related in some way, and the result is not due to random chance.

d) Regression between acquisition of skills and organizational performance

Hypothesis (H_{02}) - There is no statistically significant effect of acquisition of skills on the organizational performance. Model Summary for acquisition of skills and organizational performance.

Table 4-11: Model summary for acquisition of skills

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.367 ^a	.135	.131	.13983

a. Predictors: (Constant), Acquisition of Skills

The regression results represented above indicate that acquisition of skills explains 13.5% ($R^2 = 0.135$) variations in the organizational performance of Wellcome Trust Programme.

e) ANOVA Summary for acquisition of skills and organizational performance

Table 4-12: ANOVA result for acquisition of skills

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.655	1	.655	33.479	.000 ^b
	Residual	4.204	215	.020		
	Total	4.858	216			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Acquisition of Skills

The study further sought to examine the statistical significance of the research model. The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis showed lack of significant relationship between acquisition of knowledge and skills and organizational performance. The ANOVA results showed an F value of 33.479 with a significance value of .000 which is less than .005; hence, the null hypothesis of the study is rejected. The study concludes that there is a significant relationship between acquisition of skills and the organizational performance of Wellcome Trust Programme.

f) Regression coefficients for acquisition of knowledge and skills and organizational performance

The research further sought to examine the significance of the relationship between acquisition of knowledge and skills and the organizational performance, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients, which were subjected to further t-tests. In general, the null hypothesis holds that, beta (β) = 0; that is there is no statistically significant relationship between acquisition of knowledge and skills and organizational performance.

Table 4-13: Regression coefficients for acquisition of skills

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.424	.109		13.028	.000
	Acquisition of knowledge and skills	.299	.052	.367	5.786	.000

a. Dependent Variable: Organizational performance

$$Y = 1.424 + 0.367X_2 + 0.109$$

The results above indicate a constant $\alpha = 1.424$ is significantly different from 0 since the p-value $.000 < .005$. The beta value is (β) = .367 and is significantly different from 0 since the p-value

.000<.005. This indicates that there is a statistically significant positive effect of acquisition of knowledge and skills on the organizational performance.

4.4.3 Digitized change management approaches and organizational performance

a) Frequency analysis and percentages

The study sought to obtain the respondents' views on the effect of digitized change management approaches on organizational performance. The study found that 40.72% of the respondents agreed that digital tools have significantly improved our organizations change management processes. This led to better organizational performance outcomes of which 3.17% strongly agreed, 50.68% were uncertain and 4.98% disagreed. 57.91% agreed that the organization effectively integrated digital technologies into change initiatives, which resulted in smoother transitions and improved performance metrics, 1.81% strongly agreed, 37.10% were uncertain and 3.17% disagreed. Additionally, 70.59% agreed that the use of digitized change management approaches had enhanced employee engagement and collaboration positively impacting organizational performance, 27.60% were uncertain, while 1.81% strongly agreed.

The study also found that 45.70% of the respondents agreed that digital change management tools helped to adapt to market changes more efficiently. It contributed to improved overall performance, whereby 2.26% strongly agreed, 47.51% were uncertain and 4.07% disagreed. 81.90% agreed that the organization experienced tangible benefits in terms of cost savings and resource optimization due to digitized change management practices, 1.36% strongly agreed, while 16.74% were uncertain. In addition, 93.21% of the respondents agreed that employees felt more empowered and motivated to embrace change initiatives when supported by digital tools that led to enhanced performance results, 1.81% strongly agreed and 4.98% were uncertain.

Further, the study also found that 90.04% of the respondents agreed that the use of data-driven insights in digitized change management enabled the organization to make more informed decisions ultimately driving better organizational performance, 1.81% strongly agreed, while 8.14% were uncertain. The findings are in the table shown below:

Table 4-14: Digitized change management approaches

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
Digital tools have significantly improved our organization's change management processes, leading to better organizational performance outcomes.	Frequency (f)	7	90	112	11	0	221
	Percentage (%)	3.17	40.72	50.68	4.98	0.00	100
Our organization effectively integrates digital technologies into change initiatives, resulting in smoother transitions and improved performance metrics.	Frequency (f)	4	128	82	7	0	221
	Percentage (%)	1.81	57.91	37.10	3.17	0.00	100
The use of digitized change management approaches has enhanced employee engagement and collaboration, positively impacting organizational performance.	Frequency (f)	4	156	61	0	0	221
	Percentage (%)	1.81	70.59	27.60	0	0	100
Digital change management tools have helped us adapt to market changes more efficiently, contributing to improved overall performance.	Frequency (f)	5	101	105	9	0	221
	Percentage (%)	2.26	45.70	47.51	4.07	0.00	100

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
Our organization has experienced tangible benefits in terms of cost savings and resource optimization due to digitized change management practices.	Frequency (f)	3	181	37	0	0	221
	Percentage (%)	1.36	81.90	16.74	0	0	100
Employees feel more empowered and motivated to embrace change initiatives when supported by digital tools, leading to enhanced performance results.	Frequency (f)	4	206	11	0	0	221
	Percentage (%)	1.81	93.21	4.98	0	0	100
The use of data-driven insights in digitized change management has enabled us to make more informed decisions, ultimately driving better organizational performance.	Frequency (f)	4	199	18	0	0	221
	Percentage (%)	1.81	90.04	8.14	0	0	100

b) Descriptive statistics of digitized change management approaches and organizational performance

The study's objective was to describe how digitized change management approaches influence organizational performance. Respondents were asked to express their degree of agreement or disagreement by responding to statements on a five-point Likert scale. The data was then analyzed using the mean and standard deviations. The interpretation of the mean was as follows: 1-1.9 strongly agree, 2-2.9 agree, 3-3.9 uncertain, 4-4.9 disagree and 5 strongly disagree. Table 4.15 summarizes the findings.

Table 4-15: Descriptive statistics for digitized change management approaches

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
Digital tools have significantly improved our organization's change management processes, leading to better organizational performance outcomes.	2.5642	3	3	0.61322	0.376	1	4
Our organization effectively integrates digital technologies into change initiatives, resulting in smoother transitions and improved performance metrics.	2.4064	2	2	0.57001	0.325	1	4
The use of digitized change management approaches has enhanced employee engagement and collaboration, positively impacting organizational performance.	2.2523	2	2	0.466	0.217	1	3
Digital change management tools have helped us adapt to market changes more efficiently, contributing to improved overall performance.	2.5374	3	3	0.60203	0.362	1	4
Our organization has experienced tangible benefits in terms of cost savings and resource optimization due to digitized change management practices.	2.1488	2	2	0.3941	0.155	1	3
Employees feel more empowered and motivated to embrace change initiatives when supported by digital	2.0234	2	2	0.24594	0.06	1	3

tools, leading to enhanced performance results.							
The use of data-driven insights in digitized change management has enabled us to make more informed decisions, ultimately driving better organizational performance.	2.0596	2	2	0.30529	0.093	1	3

The study findings from Table 4.15 showed that majority of respondents agreed to the statements that were put forward to them stating that digitized change management approaches had an influence on organizational performance. The lower the mean scores the higher the degree of agreement expressed with each statement.

Mode: - Most of the respondents agreed on average that digitized change and management approach (Mode = 2) has an effect on organizational performance.

c) Correlation between digitized change management approaches and organizational performance

The third objective sought to examine the effect of digitized change management approaches on organizational performance.

Table 4-16: Correlation analysis for change management approaches

		Digitized change management approaches	Organizational performance
Digitized change management approaches	Pearson Correlation	1	.256**
	Sig. (2-tailed)		.000
	N	221	221

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

The findings of the analysis showed that digitized change management approaches had a weak positive and significant association with organizational performance ($\rho=.256$, Sig = $.000<.005$). The results

indicate that there is a weak but reliable positive association between the two variables. While the strength of the relationship is not very strong, it is meaningful enough to suggest that the two variables are related in a way and we can be confident that it is not due to random chance.

d) Regression between digitized change management approaches and organizational performance

Hypothesis (H₀₃): There is no statistically significant effect of digitized change management approaches on organizational performance as shown in the table below:

Table 4-17: Model summary for digitized change management approaches

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.256 ^a	.065	.061	.14532
a. Predictors: (Constant), Digitized change management approaches				

The regression results presented above indicate that digitized change management approaches cause 6.5% ($R^2 = 0.065$) change in the organizational performance at Wellcome Trust Programme.

e) ANOVA Summary for digitized change management approaches and organizational performance

Table 4-18: ANOVA result for digitized change management approaches

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.318	1	.318	15.047	.000 ^b
	Residual	4.541	215	.021		
	Total	4.858	216			
a. Dependent Variable: Organizational performance						
b. Predictors: (Constant), Digitized change management approaches						

The study further sought to examine the statistical significance of the research model. The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis indicated that there is no significant relationship between digitized change management approaches

and organizational performance at Wellcome Trust Programme. The ANOVA results showed an F value of 15.047 with a significance value of .000, which is less than .005; hence, the null hypothesis of the study is rejected. The study concludes that there is a significant association between digitized change management approaches and the organizational performance.

f) Regression coefficients for digitized change management approaches and organizational performance

Table 4-19: Regression coefficients for digitized change management approaches

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.775	.073		24.381	.000
	Digitized change management approaches	.122	.032	.256	3.879	.000

a. Dependent Variable: Organizational performance

$$Y = 1.775 + 0.256X_1 + 0.073$$

The results above indicate a constant $\alpha = 1.775$ is significantly different from 0 since the p-value $.000 < .005$. The beta value is $(\beta) = .256$, which is significantly different from 0 since the p-value $.000 < .005$. This indicates that there is a statistically significant positive effect of digitized change management approaches on organizational performance. A unit change in digitized change management approaches will result in a 0.256 unit change in organizational performance at Wellcome Trust Programme.

4.4.4 Enhanced data-driven decision-making and organizational performance

a) Frequency analysis and percentages

The study sought to obtain the respondents' views on the effect of enhanced data-driven decision making on organizational performance. The study found that 78.73% of the respondents agreed that as a result of digital technology adoption, the organization effectively used data analytics tools to make informed decision, where 1.36% strongly agreed and 19.91% were uncertain. 90.04% agreed that digital technology adoption contributed to the availability of data driven insights that improved the

organizations decision making processes, 0.90% strongly agreed and 9.05% were uncertain. Additionally, 72.40% agreed that the organization invests sufficient resources in data governance and data quality management with the implementation of digital technology, 25.79% were uncertain, while 0.90% strongly agreed.

The study also found that 83.71% of the respondents agreed that data-driven decision-making led to measurable improvements in organizational performance metrics through digital technology adoption, 0.90% strongly agreed and 15.38% were uncertain. 85.52% agreed that the organization invested adequate resources to train employees in data analysis and interpretation as a consequence of embracing digital technology, 11.76% were uncertain, while 2.71% disagreed. In addition, 95.48% of the respondents agreed that the adoption of digital technologies in the operations enhanced confidence on data-driven decisions that contribute significantly on organization’s performance, 0.90% strongly agreed and 2.71% were uncertain.

Lastly, the study also found that 85.97% of the respondents agreed that the organization established clear metrics to evaluate the impact of data-driven initiatives on organizational performance. The findings are in the table shown below:

Table 4-20: Enhanced data-driven decision-making

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
As a result of digital technology adoption, our organization effectively uses data analytics tools to make informed decisions.	Frequency (f)	3	174	44	0	0	221
	Percentage (%)	1.36	78.73	19.91	0.00	0.00	100.00
Digital technology adoption has contributed to, the availability of data-driven insights that has improved our organization's decision-making processes.	Frequency (f)	2	199	20	0	0	221
	Percentage (%)	0.90	90.04	9.05	0.00	0.00	100.00
With the implementation of digital technology, our	Frequency (f)	2	160	57	2	0	221

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
organization invests sufficient resources in data governance and data quality management.	Percentage (%)	0.90	72.40	25.79	0.90	0.00	100.00
Through digital technology adoption, data-driven decision-making has led to measurable improvements in our organizational performance metrics.	Frequency (f)	2	185	34	0	0	221
	Percentage (%)	0.90	83.71	15.38	0.00	0.00	100.00
As a consequence of embracing digital technology, the organization has invested adequate resources to train employees in data analysis and interpretation.	Frequency (f)	0	189	26	6	0	221
	Percentage (%)	0.00	85.52	11.76	2.71	0.00	100
Given our adoption of digital technologies in our operations, I feel confident that data-driven decisions contribute significantly to our organization's success.	Frequency (f)	2	211	6	2	0	221
	Percentage (%)	0.90	95.48	2.71	0.90	0.00	100.00
By integrating digital technology, our organization has established clear metrics to evaluate the impact of data-driven initiatives on organizational performance.	Frequency (f)	2	190	24	5	0	221
	Percentage (%)	0.90	85.97	10.86	2.26	0.00	100.00

b) Descriptive statistics of enhanced data-driven decision-making and organizational performance

The study’s objective was to describe how acquisition of skills influence organizational performance. Respondents were asked to express their degree of agreement or disagreement by responding to statements on a five-point Likert scale. The data was then analyzed using the mean and standard deviation. The interpretation of the mean was as follows: 1-1.9 strongly agree, 2-2.9 agree, 3-3.9 uncertain, 4-4.9 disagree and 5 strongly disagree. Table 4.21 summarizes the findings:

Table 4-21: Descriptive statistics for enhanced data driven decision-making

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
As a result of digital technology adoption, our organization effectively uses data analytics tools to make informed decisions.	2.1789	2	2	0.41859	0.175	1	3
Digital technology adoption has contributed to, the availability of data-driven insights that has improved our organization's decision-making processes.	2.0734	2	2	0.29454	0.087	1	3
With the implementation of digital technology, our organization invests sufficient resources in data governance and data quality management.	2.257	2	2	0.45895	0.211	1	4
Through digital technology adoption, data-driven decision-making has led to measurable	2.1435	2	2	0.36441	0.133	1	3

Statement	Mean	Median	Mode	Std. Deviation	Variance	Minimum	Maximum
improvements in our organizational performance metrics.							
As a consequence of embracing digital technology, the organization has invested adequate resources to train employees in data analysis and interpretation.	2.1455	2	2	0.40334	0.163	2	4
Given our adoption of digital technologies in our operations, I feel confident that data-driven decisions contribute significantly to our organization's success.	2.028	2	2	0.21485	0.046	1	4
By integrating digital technology, our organization has established clear metrics to evaluate the impact of data-driven initiatives on organizational performance.	2.1343	2	2	0.40409	0.163	1	4

The study findings from Table 4.21 showed that majority of the respondents agreed to the statements that were put forward to them that digitized change management approaches influenced organizational performance. The lower the mean scores the higher the degree of agreement that is expressed with each statement.

Mode: - Most of the respondents agree that enhanced data-driven decision-making has an effect on organizational performance.

c) Correlation between enhanced data-driven decision-making and organizational performance

The third objective sought to examine the effect of enhanced data-driven decision-making on organizational performance.

Table 4-22: Correlation analysis for enhanced data driven decision-making

		Enhanced data-driven-decision making	Organizational performance
Enhanced data-driven decision-making	Pearson Correlation	1	.125
	Sig. (2-tailed)		.067
	N	221	221

The findings of the analysis showed that enhanced data-driven decision-making had a weak positive and insignificant association with organizational performance ($\rho = .125$, Sig = $.067 > .005$). The results indicate that there is a weak relationship between the two variables and the Significance value of $.067$ which is greater than the conventional threshold of $.005$, indicates that the observed correlation is not statistically significant. The results show that there is no reliable association between the two variables as the relationship is very weak and likely due to random chance.

d) Regression between enhanced data-driven decision-making and organizational performance

Hypothesis (H₀₄): There is no statistically significant effect of enhanced data-driven decision-making on the organizational performance. Model Summary for enhanced data-driven decision-making and organizational performance:

Table 4-23: Model summary for enhanced data-driven decision-making

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.125 ^a	.016	.011	.14915
a. Predictors: (Constant), Enhanced data-driven decision making				

The regression results represented above indicate that enhanced data-driven decision-making explains 1.6% ($R^2 = 0.016$) variation in the organizational performance at Wellcome Trust Programme.

e) ANOVA Summary for enhanced data-driven decision-making and organizational performance

Table 4-24: ANOVA result for enhanced data-driven decision-making

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.076	1	.076	3.396	.067 ^b
	Residual	4.783	215	.022		
	Total	4.858	216			
a. Dependent Variable: Organizational performance						
b. Predictors: (Constant), Enhanced data driven decision making						

The study further sought to examine the statistical significance of the research model. The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis showed that there was no significant relationship between enhanced data-driven decision-making and the organizational performance. The ANOVA results showed an F value of 3.396 with a significance value of 0.067, which was more than .005; hence, the null hypothesis of the study was not rejected. The study concludes that there is no significant relationship between enhanced data-driven decision-making and the organizational performance at Wellcome Trust Programme.

f) Regression coefficients for enhanced data-driven decision-making and organizational performance

Table 4-25 Regression coefficients for enhanced data driven decision-making

		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.834	.120		15.260	.000
	Enhanced data-driven decision-making	.103	.056	.125	1.843	.067

a. Dependent Variable: Organizational performance

$$Y = 1.834 + 0.125X_2 + 0.12$$

The results above indicate a constant $\alpha = 1.834$ is significantly different from 0 since the p-value $.000 < .005$. The beta value is $(\beta) = .125$ and is insignificantly different from 0 since the p-value $.067 > .005$. This indicates that there is no statistically significant positive effect of enhanced data-driven decision-making on organizational performance at Wellcome Trust Programme.

4.4.5 Organizational performance

a) Frequency analysis and percentages

The study sought to obtain the respondents' views on different aspects of organizational performance. The study found that 78.73% of the respondents agreed that the organization had a leadership team that was digitally savvy and drove technology initiatives that met organizational objectives, while 21.72% strongly agreed. 76.02% agreed that stakeholder requirements were gathered and used to facilitate acquisition and adoption of suitable digital technologies to meet business objectives, 3.17% strongly agreed, while 20.81% were uncertain. Additionally, 85.52% agreed that the choice of technology adopted and implemented was aligned to organizational strategic objectives, 11.31% were uncertain, while 3.17% strongly agreed.

The study also found that 91.85% of the respondents agreed that the leadership team availed resources to support adoption of appropriate digital technologies that met operational requirements, 1.81% strongly agreed, while 6.33% were uncertain. 96.83% agreed that the adopted digital technologies

enhanced employee productivity and collaboration, 1.36% strongly agreed, while 1.81% were uncertain. In addition, 61.08% of the respondents agreed that the digital technology enabled the organization to be more customer centric, 2.26% strongly agreed, 35.29% were uncertain and 1.36% disagreed.

Further, the study also found that 96.38% of the respondents agreed that there were improved operational efficiency that could be attributed to adoption and use of appropriate digital technologies, 2.26% strongly agreed, while 1.36% were uncertain. 88.69% of the respondents agreed that the organization improved its analysis and knowledge management capabilities through adoption and application of digital technologies, 1.81% strongly agreed, while 9.5% were uncertain.

In addition, 93.21% of the respondents agreed that digital technologies aided in achievement and measurement of key performance indicators at Wellcome Trust Programme, while 1.81% strongly agreed and 4.98% uncertain. Lastly, 96.38% agreed that overall adoption and use of digital technologies had a positive impact in achievement of organizational objectives leading to improved organizational performance. 2.26% strongly agreed, while 1.36% were uncertain.

The table below shows the findings:

Table 4-26: Organizational performance

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
The organization has a leadership team that is digitally savvy and drives technology initiatives that meet organizational objectives.	Frequency (f)	48	174	0	0	0	221
	Percentage (%)	21.72	78.73	0.00	0.00	0.00	100
Stakeholder requirements are gathered and used to facilitate acquisition and adoption of suitable digital technologies to meet business objectives.	Frequency (f)	7	168	46	0	0	221
	Percentage (%)	3.17	76.02	20.81	0.00	0.00	100
The choice of technology adopted and implemented is	Frequency (f)	7	189	25	0	0	221

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
aligned to the organizational strategic objectives.	Percentage (%)	3.17	85.52	11.31	0.00	0.00	100
The leadership team avails resources to support adoption of appropriate digital technologies that meet operational requirements.	Frequency (f)	4	203	14	0	0	221
	Percentage (%)	1.81	91.85	6.33	0.00	0.00	100
The adopted digital technologies have enhanced employee productivity and collaboration.	Frequency (f)	3	214	4	0	0	221
	Percentage (%)	1.36	96.83	1.81	0.00	0.00	100
Digital technologies have enabled the organization to be more customer centric	Frequency (f)	5	135	78	3	0	221
	Percentage (%)	2.26	61.08	35.29	1.36	0.00	100
There has been improved operational efficiency that could be attributed to adoption and use of appropriate digital technologies.	Frequency (f)	5	213	3	0	0	221
	Percentage (%)	2.26	96.38	1.36	0.00	0.00	100
The organization has improved its analysis and knowledge management capabilities through adoption and application of digital technologies.	Frequency (f)	4	196	21	0	0	221
	Percentage (%)	1.81	88.69	9.50	0.00	0.00	100
Digital technologies have aided in achievement and measurement of key performance indicators at Wellcome Trust Programme.	Frequency (f)	4	206	11	0	0	221
	Percentage (%)	1.81	93.21	4.98	0.00	0.00	100

Statement		Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total
Overall, the adoption and use of digital technologies have had a positive impact on the achievement of organizational objectives leading to improved organizational performance.	Frequency (f)	5	213	3	0	0	221
	Percentage (%)	2.26	96.38	1.36	0.00	0.00	100

b) Descriptive statistics of organizational performance

The study's objective was to describe how acquisition of skills influence organizational performance. Respondents were asked to express their degree of agreement or disagreement by responding to statements on a five-point Likert scale. The data was then analyzed using the mean and standard deviation. The interpretation of the mean was as follows: 1-1.9 strongly agree, 2-2.9 agree, 3-3.9 uncertain, 4-4.9 disagree and 5 was strongly disagree. Table 4.27 summarizes the findings:

Table 4-27: Descriptive statistics for organizational performance

Statement	mean	median	mode	Std. Deviation	variance	min	max
The organization has a leadership team that is digitally savvy and drives technology initiatives that meet organizational objectives.	1.79	2	2	0.41	0.17	1	2
Stakeholder requirements are gathered and used to facilitate acquisition and adoption of suitable digital technologies to meet business objectives.	2.18	2	2	0.45	0.20	1	3
The choice of technology adopted and implemented is aligned to the organizational strategic objectives.	2.08	2	2	0.36	0.13	1	3
The leadership team avails resources to support adoption of appropriate digital technologies that meet operational requirements.	2.04	2	2	0.26	0.07	1	3
The adopted digital technologies have enhanced	2.00	2	2	0.15	0.02	1	3

employee productivity and collaboration.							
Digital technologies have enabled the organization to be more customer centric	2.36	2	2	0.53	0.28	1	4
There has been improved operational efficiency that could be attributed to adoption and use of appropriate digital technologies.	2.00	2	2	0.15	0.02	1	3
The organization has improved its analysis and knowledge management capabilities through adoption and application of digital technologies.	2.07	2	2	0.31	0.10	1	3
Digital technologies have aided in achievement and measurement of key performance indicators at Wellcome Trust Programme.	2.03	2	2	0.24	0.06	1	3
Overall, the adoption and use of digital technologies have had a positive impact on the achievement of organizational objectives leading to improved organizational performance.	2.00	2	2	0.19	0.04	1	3

The study findings from Table 4.27 showed that majority of the respondents agreed to the statements that were put forward to them agreed that organizational performance was influenced by various variables; such as, leadership, choice of technology, resources, employee productivity and knowledge management. The lower the mean scores the higher the degree of agreement expressed with each statement.

Mode: - Most of the respondents agreed on average that organizational performance is affected by the variables under this study (Mode=2).

4.4.6 Multiple regression analysis

Overall regression analysis

General Hypothesis

H₀₅ There is no statistically significant effect of digital technology adoption on the organizational performance at Wellcome Trust Programme.

Table 4-28: Summary regression model

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512 ^a	.262	.248	.13007
a. Predictors: (Constant), Digital technology adoption (enhanced communication collaboration, acquisition of skills, digitized change management approaches, enhanced data-driven decision-making)				

The regression results represented above indicate that digital technology adoption explains 26.2% ($R^2 = .262$) variations in the organizational performance of Wellcome Trust Programme. The remaining 73.8% variations is explained by other factors that are not considered in the model.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.056	.142		7.431	.000
	Enhanced communication collaboration	.272	.051	.356	5.327	.000
	Acquisition of skills	.195	.052	.239	3.728	.000
	Digitized change management approaches	.067	.029	.141	2.294	.023
	Enhanced data driven decision-making	-.071	.054	-.086	-1.324	.187
a. Dependent Variable: Organizational performance						

Multiple Regression Analysis

Model: -

$$Y = 1.056 + 0.365X_1 + 0.239X_2 + 0.141X_3 - 0.086X_4 + 0.14$$

Overall, the result showed that enhanced communication collaboration, acquisition of skills and digitized change management approaches were significant positive predictors of organizational performance ($\beta=.356, t= 5.327, p< .000, \beta=.239, t= 3.728, p< .000$ and $\beta=.141, t= 2.294, p< .023$, respectively). The result also showed that enhanced data-driven decision-making was not a significant predictor of organizational performance ($\beta=-0.086, t= -1.324, p=.187$).

Table 4-29: Summary ANOVA Model

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.271	4	.318	18.787	.000 ^b
	Residual	3.587	212	.017		
	Total	4.858	216			
a. Dependent Variable: Organizational performance						
b. Predictors: (Constant), Enhanced communication collaboration, acquisition of skills and knowledge, digitized change management approaches and enhanced data-driven decision-making.						

The study further sought to examine the statistical significance of the research model. The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was that there was no significant relationship between digital technology adoption and organizational performance. The ANOVA results showed an F value of 18.787 with a significance value of .000 which was less than .005; hence, the null hypothesis of the study was rejected. Thus, the study concludes that there is a significant relationship between digital technology adoption and organizational performance at Wellcome Trust Programme.

4.4.7 Diagnostic Tests

The study sought to conduct inferential analysis to examine the effect of the predictor variables on organizational performance. The following tests were conducted to test the linear regression assumptions.

Multicollinearity

Table 4-30: Collinearity Statistics

Item	Tolerance	VIF
Enhanced communication collaboration	.612	1.834
Acquisition of knowledge and skills	.187	4.762
Digitized change management approaches	.253	4.246
Enhanced data driven decision-making	.561	1.932

The study aimed at determining the multicollinearity statistics of the independent variables and focused the analysis on the tolerance and Variance Inflation Factor (VIF) values. The findings showed tolerance values above 0.1 meaning that there was a low level of multicollinearity in the regression model. Multicollinearity occurs when two or more predictor variables are highly correlated with each other. Additionally, the VIF results showed values that were below 10, denoting that there was no presence of multicollinearity in the testing of independent and dependent variables in the regression model.

Normality Tests

Table 4-31: Normality Statistics

Variables	Kolmogorov - Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Enhanced communication collaboration	.287	4	.104	.846	4	.170
Acquisition of skills	.274	4	.109	.861	4	.273
Digitized change management approaches	.265	4	.187	.764	4	.154
Enhanced data driven decision-making	.279	4	.136	.843	4	.162

Normality tests assess whether the residuals; the differences between actual and predicted values are normally distributed. The study adopted the Shapiro-Wilk test, that specifically assesses whether a sample comes from a normally distributed population. The findings from the study showed that the significance values for all the predictor variables were above 0.05, hence the conclusion that the data was normally distributed. A value of 0.05 or lower would have indicated that the data was not normally distributed and this could affect the validity of statistical inferences.

Autocorrelation Tests

Table 4-32: Autocorrelation Statistics

Standard Error of the Estimate	Durbin -Watson
0.1514	2.146

a. Predictors: (Constant) - Enhanced communication collaboration, Acquisition of skills, Digitized change management approaches, and Enhanced data driven decision-making.

b. Dependent variable; - Organizational Performance.

The Durbin -Watson test is used in statistics to test for the auto correlation in the residuals from a regression analysis. The results from the study showed a Durbin Watson value of greater than 2 denoting that there is no statistical evidence that the data is positively correlated. The Durbin Watson statistic assumes a value between 0 and 4. A value equal to 2 indicates that there is no autocorrelation, while a value higher than 2 indicates a negative correlation. A value below 2 indicates that there is presence of a positive autocorrelation.

4.6 Chapter Summary

This chapter focused on the presentation of the findings of the study. These were presented in relation to the objectives of the study. The analysis was conducted using descriptive and inferential analysis. The overall regression results indicated that there was a positive and significant association at 26.2% ($R^2=.262$) between digital technology adoption and organizational performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, discussions and recommendations made based on the findings of the investigation. This chapter is organized as follows: section 5.1 presents the introduction, section 5.2 the summary of the findings, section 5.3 the discussions of the findings, section 5.4 the conclusions, section 5.5 contributions to the study, section 5.6 recommendations, section 5.7 the suggested areas for further research; and section 5.8, which presents the limitations of the study.

5.2 Summary of Findings

This section presents the summary of the findings of the study in relation to the general research objective of investigating the effect of digital technology adoption on organizational performance in the case study of Wellcome Trust Programme. The study focused on the following specific research objectives: investigating the influence of enhanced communication collaboration on organizational performance, determining the influence of acquisition of skills on organizational performance, evaluating the influence of digitized change management approaches on organizational performance, and investigating how enhanced data-driven decision-making influences organizational performance.

The study was conducted at Wellcome Trust research programme based in Kilifi, Mbale and Nairobi with a target population of 263. The response rate of 84.03% was obtained from 221 respondents. The study findings showed that enhanced communication collaboration had a moderate positive and significant association with organizational performance ($p=.383$, Sig = $.000<.005$). In addition, the findings indicated that enhanced communication collaboration accounts for 17.4% ($R^2 = 0.174$) change in the organizational performance at Wellcome Trust Programme.

The second research objective that determined the influence of acquisition of skills displayed a weak positive and significant association with organizational performance ($p=.171$, Sig = $.012>.005$). The regression results indicated that acquisition of skills explained 13.5% ($R^2 = 0.135$) variations in the organizational performance of Wellcome Trust Programme.

The evaluation of the influence of digitized change management approaches was portrayed in the study to have a weak positive and significant association with organizational performance ($\rho=.256$, Sig = $.000<.005$). The regression results indicated that digitized change management approaches caused 6.5% ($R^2 = 0.065$) change in the organizational performance.

Finally, investigating how enhanced data-driven decision-making influence organizational performance showed that it had a weak positive and insignificant association with organizational performance ($\rho = .125$, Sig = $.067>.005$). The regression results indicated that enhanced data-driven decision-making explained 1.6% ($R^2 = 0.016$) variation in the organizational performance at Wellcome Trust Programme.

5.3 Discussion

This section discusses the findings of the study and compares them to broader literature. The study sought to investigate the effect of digital technology adoption on organizational performance in the case study of Wellcome Trust Programme.

5.3.1 Enhanced communication collaboration and organizational performance

The study found that majority of the respondents (70.136%) and (9.049%) agreed and strongly agreed respectively that effective communication channels within the organization significantly contributed to positive overall performance outcomes. Additionally, most respondents (92.76%) agreed that collaborative teamwork and coordination led to improved organizational performance. The study established that 94.57% of the respondents agreed that effective communication tools and platforms facilitated seamless collaboration leading to enhanced organizational performance. In agreement with these findings, Smith and Johnson (2021) found that the use of multiple communication channels, collaborative teamwork and use of digital platforms led to improved collaboration, enhanced productivity and had a positive impact on performance outcomes.

It was also established that majority (60.18%) of the respondents strongly agreed and agreed that the organization fostered a culture of open communication, which correlated well with improved achievement of performance metrics. The feedback from majority of the respondents (77.83%) also indicated that they agreed and strongly agreed that collaborative decision-making processes resulted in more innovative solutions and better organizational performance. The findings are in line with observations made by Kim, et al. (2021) who attested that effective communication contributed to

higher employee engagement, which leads to improved organizational performance indicators; such as, growth of revenue and customer loyalty.

The findings of the study established that (93.21%) of the respondents agreed that employees who feel empowered to share ideas and feedback contributed positively to the organization's performance. Moreover, majority of the respondents (86.88%) stated that everyone in the organization had access to technology platforms to undertake their duties and promote effective communication within the organization. In addition, 73.3% of the respondents agreed that the organization allocated adequate funding to support technology initiatives. Similarly, Wang, Chen, Zhang (2018) demonstrated in their study that collaborative teams exhibited superior innovation through sharing of ideas, which led to improved performance metrics; such as, new product launches and market share gains.

The correlation results showed that there was a moderate positive and significant association between enhanced communication collaboration and organizational performance ($p=.383$, Sig = .000<.005). A unit change in enhanced communication collaboration resulted in a .383 unit change in organizational performance. This indicates that there is a statistically significant positive effect of enhanced communication collaboration on organizational performance.

According to the regression results, it showed that enhanced communication collaboration accounts for 17.4% ($R^2 = 0.174$) change in organizational performance at Wellcome Trust Programme. Additionally, the study showed from the results of the ANOVA the F value of 45.368 with a significance value of .000, which was less than .005. It further concluded that there was a significant relationship between enhanced communication collaboration and organizational performance.

5.3.2 Acquisition of skills and organizational performance

The study found that (69.98%) of the respondents strongly agreed and agreed that the acquisition of new skills and knowledge was essential for improving the organization's overall performance. 70.13% of the respondents strongly agreed and agreed that employees who actively sought opportunities to learn and develop new skills contributed positively to the organization's performance. Additionally, 65.16% agreed that the organization invested sufficient resources in training programs to enhance employee knowledge and skills, which led to improved performance outcomes. Brown and White (2020) agree with the findings of the study that has consistently showed the positive impact of knowledge acquisition and skill development on organizational effectiveness, efficiency and competitiveness.

The study also found that 94.12% of the respondents strongly agreed and agreed that the continuous development of employee competencies through training programs positively impacted on organizational performance. 90.95% strongly agreed and agreed that employees who demonstrated a high level of expertise and skills were more effective in driving organizational performance improvements. In addition, 94.12% of the respondents strongly agreed and agreed that the ability to adapt and learn new skills quickly was a factor in the organization's success and performance. These findings were consistent with the studies conducted by Smith and Johnson (2021), which highlighted that the employees who continuously acquire and update their industry knowledge and technical skills are better equipped to handle complex tasks, adapt to the ever-changing market dynamics, and contribute to innovation and problem-solving within the organization.

The study also found that 88.68% of the respondents strongly agreed and agreed that employees who received regular training and development opportunities felt more motivated and engaged resulting in better organizational performance. Furthermore, 91.85% of the respondents strongly agreed and agreed that the management provided adequate support and leadership for technology initiatives that supported business operations. The findings were supported in the studies conducted by Wang, Chen and Zhang (2018) and Gupta, A. K. and Gupta, K. (2019) who demonstrated that organizations, which promote a culture of perpetual learning, knowledge exchange and collaboration amongst employees experience improved performance metrics; such as, innovation, process efficiency, customer service quality and financial performance.

The correlation results showed that there was a weak positive and insignificant association between acquisition of skills and organizational performance ($p=.171$, Sig = $.012 > .005$). A unit change in acquisition of skills resulted in a .171 unit change in organizational performance. This indicates that there is a statistically insignificant positive effect of acquisition of skills on organizational performance.

According to the regression results, it showed that acquisition of skills explains 13.5% ($R^2 = 0.135$) variations in the organizational performance of Wellcome Trust Programme. Additionally, the study from the results of the ANOVA showed an F value of 33.479 with a significance value of .000, which was less than .005, and concluded that there was a significant relationship between acquisition of skills and the organizational performance of Wellcome Trust Programme.

5.3.3 Digitized change management approaches and organizational performance

The study found that 40.72% of the respondents strongly agreed and agreed that digital tools have significantly improved the organizations change management processes of which it leads to better organizational performance outcome, 50.68% were uncertain and 4.98% disagreed with the statement. Majority of the respondents (57.91%) strongly agreed and agreed that the organization effectively integrated digital technologies into change initiatives, which resulted in smoother transitions and improved performance metrics, while 37.10% were uncertain and 3.17% disagreed with the statement. Additionally, 70.59% strongly agreed and agreed that the use of digitized change management approaches enhanced employee engagement and collaboration, which positively impacted the organizational performance, while 27.60% were uncertain. These findings are consistent with the study by Andriole (2023), which stated that leveraging digital technologies in change management processes can bring about more efficient and effective organizational transformations, eventually positively impacting on performance outcome.

The study also found that 45.70% of the respondents strongly agreed and agreed that digital change management tools have helped the organization to adapt to market changes more efficiently; hence, contribute to improved overall performance, while 47.51% were uncertain and 4.07% disagreed with the statement. In addition, the majority of the respondents (81.90%) strongly agreed and agreed that the organization experienced tangible benefits in terms of cost savings and resource optimization due to digitized change management practices, while 16.74% were uncertain. 93.21% of the respondents also agreed that employees felt more empowered and motivated to embrace change initiatives when supported by digital tools leading to enhanced performance results, while 4.98% were uncertain. These findings are in agreement with the Studies by Lee, Brown and Garcia (2019) who found out that organizations that adopted digital communication channels; such as, collaboration software, social intranets and project management tools experienced improved sharing of information, enhanced stakeholder engagement and improved alignment during change processes.

Lastly, 90.04% of the respondents agreed that the use of data-driven insights in digitized change management enabled the organization to make more informed decisions that ultimately led to a better organizational performance. These findings are in agreement with the studies by Johnson and Smith (2020) and Kim, Lee and Brown (2021), which showed that organizations using data analytics for

change management could identify Key Performance Indicators (KPIs) better, monitor progress and optimize change interventions, which as a result led to more successful outcome.

The correlation results showed that there was a weak positive and significant association between digitized change management approaches and organizational performance ($p=.256$, Sig = $.000<.005$). A unit change in digitized change management approaches resulted in a .256 unit change in organizational performance. This indicated that there was a statistically significant positive effect of digitized change management approaches on organizational performance.

According to the regression results, it showed that digitized change management approaches explained 6.5% ($R^2 = 0.065$) variations in the organizational performance of Wellcome Trust Programme. Additionally, from the results of the ANOVA it showed an F value of 15.047 with a significance value of .000, which was less than .005. It concluded that there was a significant relationship between digitized change management approaches and organizational performance of Wellcome Trust Programme.

5.3.4 Enhanced data-driven decision-making and organizational performance

The study found that majority of the respondents (78.73%) agreed that as a result of digital technology adoption, the organization effectively used data analytics tools to make informed decisions. A majority of the respondents (90.04%) also stated that they agreed that digital technology adoption contributed to the availability of data-driven insights that improved the organization's decision-making processes. Additionally, 72.40% agreed that the organization invested and continued to invest sufficient resources in data governance and data quality management with the implementation of digital technology, 25.79% were uncertain. These findings are in agreement with Doe (2020) who stated that digital technology adoption has significantly enhanced data-driven decision-making within organizations by providing advanced analytics tools and platforms that enable more accurate, timely and insightful decision-making processes. In the case of Wellcome Trust Programme, the study was able to identify that the digital transformation journey was an ongoing process and the organization was yet to fully benefit from the digital transformation initiatives, which were underway.

The study also found that majority of the respondents (83.71%) agreed that through digital technology adoption, data-driven decision-making led to measurable improvements in organizational performance metrics. Majority (85.52%) of the respondents also agreed that the organization invested and continued to invest adequate resources to train employees in data analysis and interpretation as a consequence of

embracing digital technology. In addition, 95.48% of the respondents agreed that they felt confident that data-driven decisions contributed significantly to the organization's success with the adoption of digital technologies in the operations. Lastly, the study established that majority (85.97%) of the respondents agreed that the Programme had established clear metrics of evaluating the impact of data-driven initiatives on organizational performance by integrating digital technologies. These findings are in agreement with the works of Brown and White (2020) that asserted that digital technologies enabled real-time data monitoring and reporting, and facilitated agile and responsive decision-making in dynamic business environments.

The correlation results showed that there was a weak positive and insignificant association between enhanced data-driven decision-making and organizational performance ($\rho = .125$, Sig = $.067 > .005$). A unit change in enhanced data-driven decision-making resulted in a .125 unit change in organizational performance. This indicated that there was a statistically significant positive effect of enhanced data-driven decision-making on organizational performance.

According to the regression results, it showed that enhanced data-driven decision-making explains 1.6% ($R^2 = 0.016$) variations in the organizational performance of Wellcome Trust Programme. Additionally, from the results of the ANOVA it showed an F value of 3.396 with a significance value of 0.067, which was more than .005. It concludes that there is no significant relationship between enhanced data-driven decision-making and the organizational performance of Wellcome Trust Programme.

5.3.5 Multiple regression analysis

The study established that digital technology adoption explained 26.2% ($R^2 = .262$) variations in organizational performance of Wellcome Trust Programme from the multiple regression analysis. This concluded that there was a significant positive relationship between digital technology adoption and organizational performance at Wellcome Trust Programme. The remaining 73.8% variations was explained by other factors not considered in the model. The findings demonstrated that enhanced communication collaboration, acquisition of skills and digitized change management approaches were significant positive predictors of organizational performance ($\beta = .365$, $t = 5.327$, $p < .000$, $\beta = .239$, $t = 3.728$, $p < .000$ and $\beta = .141$, $t = 2.294$, $p < .023$, respectively). The findings also showed that enhanced data-driven decision-making was not a significant predictor of organizational performance ($\beta = -0.086$, $t = -1.324$, $p = .187$) in the case of Wellcome Trust Programme. The ANOVA results showed an

F value of 18.787 with a significant value of .000, which is less than .005. It concluded that there was a significant relationship between digital technology adoption and organizational performance at Wellcome Trust Programme.

5.4 Conclusions

The study sought to establish the effects of digital technology adoption on organizational performance at Wellcome Trust Research Programme. The study developed four specific research objectives that aided in testing the association between the variables. The findings of the research indicated that there was a statistically significant effect of digital technology adoption on organizational performance at Wellcome Trust Programme. Based on the findings, digital technology adoption explains 26.2% ($R^2 = .262$) variations in organizational performance at Wellcome Trust Programme.

The findings concluded that there was a statistically significant positive effect of enhanced communication collaboration on organizational performance. The results showed a unit change in enhanced communication collaboration resulted in a .383 unit change in organizational performance. Additionally, the findings also showed a statistically insignificant positive effect of acquisition of skills on organizational performance. A unit change in acquisition of skills resulted in a .171 unit change in organizational performance.

The study concluded from the findings that there was a weak positive and statistically significant association between digitized change management approaches and organizational performance. A unit change in digitized change management approaches resulted in a .256 unit change in organizational performance. Based on the results, the study concluded that there was a weak positive and statistically significant association between enhanced data-driven decision-making and organizational performance. A unit change in enhanced data-driven decision-making resulted in a .125 unit change in organizational performance.

Overall, the conclusion of the study posits that digital technology adoption explains 26.2% ($R^2 = .262$) variations in organizational performance at Wellcome Trust Programme from the multiple regression results. The findings showed that three variables; enhanced communication collaboration, acquisition of skills and digitized change management approaches were significant positive predictors of organizational performance. On the other hand, the results showed that enhanced data-driven decision-making was not a significant predictor of organizational performance at Wellcome Trust Programme.

The results conclude that there is a significant relationship between digital technology adoption and organizational performance at Wellcome Trust Programme.

5.5 Contributions to the study

In the area of educational research, this study has contributed in advancing our theoretical understanding of how digital technology integration impacts business outcomes. The study findings and discussions have deepened our understanding on different technology adoption enablers and further expanded our knowledge on the nuances of digital adoption rates in the medical research space.

From a policy perspective, the study has contributed valuable insights to policy by identifying obstacles that have hindered digital adoption; such as, lack of digital skills, inadequate change management mechanisms, inadequate infrastructure and regulatory hurdles. This insight allows policymakers to design targeted interventions to address these challenges. By understanding the areas where digital adoption yields the highest returns, governments and policy makers can allocate resources effectively and efficiently fund programs that address it.

The study has contributed positively to technology practitioners by aiding them to understand the impact of digital technologies on organizational performance, and to help them in making informed decisions about technology investments and digital transformation strategies. Understanding the factors affecting employee acceptance of digital technologies enables practitioners to develop effective change management strategies in order to minimize resistance and maximize adoption. Additionally, practitioners can leverage on data analytics to measure the impact of digital initiatives on Key Performance Indicators (KPIs) and make data-driven decisions.

5.6 Recommendations

Based on the findings of the study, the researcher recommends that Wellcome Trust Programme aligns its acquisition of skills and knowledge initiatives with trainings that are relevant and directly impact their core mandate as this will affect organizational performance positively. It is further recommended that it regularly assesses the skill gaps within the organization and provide targeted trainings to address those needs. Employees to be motivated and incentivized to pursue continuous learning opportunities and professional development that will contribute to enhancing their effectiveness for better organizational outcomes.

Secondly, the organization should invest in the change management processes by integrating digital tools and providing effective trainings for the staff to fully exploit their capabilities. Moreover, the

organization should put in place structured change management processes that manage digital initiatives and transitions to ensure that they are streamlined and meet the business objectives that are intended. This will facilitate smoother transitions through empowering and motivating employees in order to embrace change initiatives for improved performance outcomes.

Thirdly, Wellcome Trust programme should invest in data analytics tools and enhance its data analytics infrastructure. This will enable it to build its capabilities in terms of generating insights from the data sets it currently holds and support data-driven decision-making moving forward. It is recommended that the Programme needs to put more resources in data quality management and data governance to ensure that analytics and decision-making are founded on accurate and consistent data. Utilization of data insights to guide decision-making is likely to lead to more informed tactics and strategies that will subsequently improve organizational performance.

Fourthly, the Programme ought to invest in enhancing the leadership skills of the leadership team, especially in the area of digital leadership. Digital leadership demands a thorough grasp of emerging technologies, their impact on business ecosystems and the ability to develop and execute strategies that are aligned with digital trends. This is a critical element that ensures that the leadership team have a clear vision of the future and the strategic insight to navigate the dynamic digital landscape for organizational performance.

Lastly, it is recommended that Wellcome Trust Programme further inculcates a culture of open communications in which it encourages collaborative decision-making. The staff are to be involved so as their feedback is sought on matters that would affect them and operations at the Programme. This will create an emotional contract between the staff and the organization; hence, creating a working environment that is empowered by shared ideas among the staff. The Programme also needs to invest in technology platforms and collaboration tools to strengthen sharing of information and promote a culture of open dialogue that encourages honest feedback and transparent communication.

5.7 Areas for further research

Further research could be conducted by taking into account additional variables that could affect adoption levels of different digital technologies; such as, organizational culture, organizational structures and organizational design. This will provide insights on how these variables influence the digital technology adoption levels within organizations and how they impact on organizational performance. Investigating the relationship between these variables and digital technology adoption

can offer insights into how variables shape technology adoption, integration and performance outcomes, which lead to more tailored and effective implementation strategies.

Additionally, further studies could be undertaken to mitigate the limitations of this study. For example, a different approach could be used to get feedback from more research institutions within the healthcare sector. This may assist to derive more generalizable or transferable findings through a broader sampling of the research institutions and the use of larger sample sizes to yield more relevant data.

5.8 Limitations of the Study

The study focused on the effect of digital technology adoption on organizational performance in research institutions within the healthcare sector in Kenya through Wellcome Trust Programme. The investigation focused on this area because there is insufficient information regarding the effects of technology adoption on organizational performance in research institutions within the health sector; notwithstanding, the heavy investments in digital technologies that the institutions have been carrying out over time. The study acknowledges that there may be other factors that impact on organizational performance other than the technology adoption. However, this particular investigation did not examine these other factors during the study.

The respondents had different degrees of knowledge and skills with respect to how digital technology adoption impacts organizational performance. This risk was mitigated through drafting detailed questionnaires where the participants were asked follow up questions, and given further clarifications that led through attaining quality feedback.

The approach used in this investigation was a case study. The limitation to this is gathering findings that reflect to a particular moment during the period of investigation. This limits the findings as they are specific to that case and cannot be easily transferable to all research institutions within the healthcare sector.

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APPENDICES

Research Instruments

The following section presents the research instruments that were used for the study. Samples (they are going to change over time) of the instruments have been attached and they are going to be subjected to piloting, supervisor review and subject matter expert reviews. The piloting will help in aligning the research instruments to ensure they are relevant and complete in meeting the research objectives and getting responses to answer the research questions.

The research instruments are basically the tools the researcher proposes to use to collect, measure and analyze the data related to the research objectives and research questions. The instruments are aligned to the study methodology chosen and will help in gathering data that is suitable, and relevant to the research area under investigation. The instruments will enable the researcher to answer the proposed research questions under investigations. Due to geographical dispersion of the sites that are considered within the study the instruments shall enable the researcher to collect information that is free of bias, personal opinions, appropriate for the context, culture and diversity of the study sites.

The chosen research instruments are suitable for the study as they shall go through the process of validation, reliability testing, relevance testing and appropriateness to ensure they are fit for purpose and they collect data in a manner that is appropriate to the research questions being asked in this study. For the respondents, the instruments shall have clear instructions on how they shall be used and the information being sought and for what purpose. This study shall use observation, questionnaires, and structured interviews as a means of collecting the data relevant to the study.

Appendix A: Participant Information and Consent Form

Section 1: Information Sheet

Investigator: Mahsen Abud

Institutional Affiliation: Strathmore Business School (SBS)

Research Topic: **THE EFFECT OF DIGITAL TECHNOLOGY ADOPTION ON ORGANIZATIONAL PERFORMANCE - A CASE STUDY OF WELLCOME TRUST PROGRAMME**

Interview Location: Welcome Trust – Nairobi, Kilifi, Mbale

Section 2: Information Sheet – The Study

SECTION 2: INFORMATION SHEET – THE STUDY

2.1 Why is this study being carried out?

To examine the effect of digital technology adoption on organizational performance with special focus on Welcome Trust Programme.

2.2 Do I have to take part?

No. Taking part in this study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to complete a questionnaire to get information on the effect of digital technology adoption on organizational performance, a case study of Welcome Trust Programme. If you are not able to answer all the questions successfully the first time, you may be asked to sit through another informational session after which you may be asked to answer the questions a second time. You are free to decline to take part in the study at any time without giving any reasons.

2.3: Who is eligible to take part in this study?

Employees and collaborating researchers of Welcome Trust Programme stationed at Nairobi, Kilifi, Mbale.

2.4: Who is not eligible to take part in this study?

Anyone below the age of 18 years

2.5: What will be taking part in this study involve for me?

You will be approached by the researcher and requested to take part in the study. If you are satisfied that you fully understand the objectives of the study, you will be asked to sign the informed consent form (this form) and then taken through a questionnaire to complete.

2.6: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any other way without your express permission.

2.7: Are there any benefits of taking part in this study?

The information will be used to highlight how digital technology adoption influences organizational performance through the Baldrige framework.

Therefore, as an employee, your input in this study will have benefits for the common cause of improving and enhancing the organization's technology, structure and putting in place mechanism that support employee performance.

2.8: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. Even if you decide to take part at first but later change your mind, you are free to withdraw at any time without any explanation.

2.9: Who will have access to my information during this research?

All research records will be stored securely and will be solely used for the purposes of supporting this study. Only the people who are closely concerned with this study will have access to your information. All your information will be kept confidential.

2.10: Who can I contact in case I have further questions?

You can contact me, Mahsen Abud, at SBS, or by e-mail mahsen.abud@strathmore.edu, or by phone through 0712672278. You can also contact my supervisor, Dr. Angela Ndunge, at the Strathmore Business School, Nairobi, or by e-mail andunge@strathmore.edu

If you want to ask someone independent anything about this research, please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: (0) 703 034418

I, _____, have had the study objectives explained to me. I have understood all that I have read and what has been explained to me. All my questions and clarifications have been answered satisfactorily. I understand that I can change my mind at any stage of study without any explanation.

Please tick the boxes that apply to you;

Participation in the research study

I AGREE to take part in this research

I DO NOT AGREE to take part in this research

Storage of information on the completed questionnaire

I AGREE to have my completed questionnaire stored for future data analysis

I DO NOT AGREE to have my completed questionnaire stored for future data analysis

Participants Signature:

Date:

Participants Name:

Date:

I, **Mahsen Abud** (Name of person taking consent), certify that I have followed the SOP for this study and have explained the study information to the study participant named above and that s/he has understood the nature and purpose of the study and consents to participation to the study. S/he has been given an opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

Date:

Investigator's Name :

Date:

Appendix B: Questionnaire for the respondents

INSTRUCTIONS:

Dear Respondent,

The aim of this questionnaire is to gather information relating to the “**Effect of Digital Technology Adoption on Organizational Performance.**” You have been chosen as one of the participants and humbly requested to participate by filling in your responses to the questions below with utmost honesty. Kindly note that this data will be treated with the utmost confidentiality and will not be used for any other purpose apart from the purpose of research.

SECTION ONE: BACKGROUND INFORMATION

1. What is your gender?

i. Male []

ii. Female []

2. What is your age group?

18 to 28 years []

29 to 39 years []

40 to 50 years []

51 to 61 years []

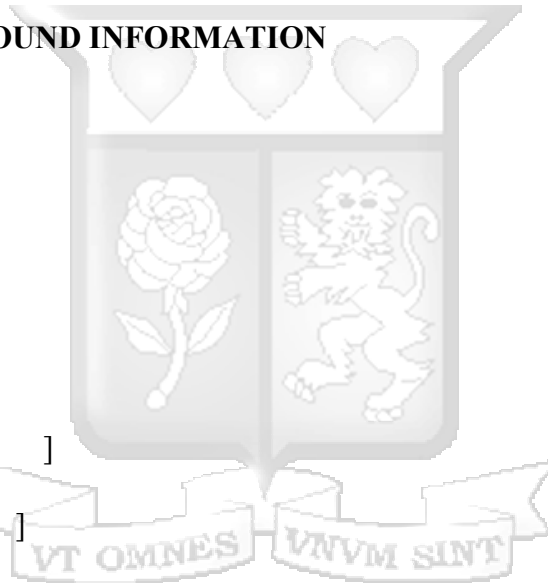
62 and above years []

3. What is your highest level of education?

i. Certificate & Below []

ii. Diploma []

iii. Undergraduate []



- iv. Masters []
- v. Doctorate []
- vi. Post Doctorate []

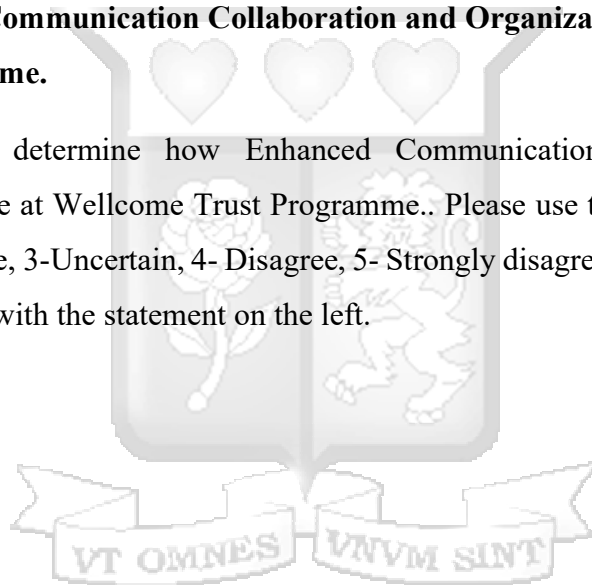
4. Are you a Permanent and pensionable Staff?

- No []
- Yes []

ii) If yes, which Centre/Department?

Section Two: Enhanced Communication Collaboration and Organizational Performance at Wellcome Trust Programme.

The researcher aims to determine how Enhanced Communication Collaboration influence Organizational Performance at Wellcome Trust Programme.. Please use the Likert scales 1-5, where 1- Strongly Agree, 2- Agree, 3-Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.



Statement	1	2	3	4	5
5. Effective communication channels within our organization significantly contribute to overall performance outcomes.					
6. Collaborative teamwork and coordination leads to improved organizational performance.					
7. Clear and transparent communication enhances employee productivity, positively impacting organizational performance.					
8. Our organization fosters a culture of open communication, which is correlated with better performance metrics.					
9. Collaborative decision-making processes result in more innovative solutions and better organizational performance.					
10. Employees who feel empowered to share ideas and feedback contribute positively to our organization's performance.					
11. Effective communication tools and platforms facilitate seamless collaboration, leading to enhanced organizational performance.					
12. Everyone in the organization has access to technology platforms to undertake their duties and promote effective communication within the organization.					
13. The organization allocates adequate funding for technology initiatives.					
14. The organization has the adequate ICT infrastructure in place to support business operations.					

15. In your opinion, what do you think are the other factors that could affect communications and collaborations within the Wellcome Trust Programme.

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Section Three: Acquisition of Skills and Organizational Performance at Wellcome Trust Programme.

The researcher aims to determine the influence of acquired skills on organizational performance at Wellcome Trust Programme. Please use the Likert scales 1-5, where 1- Strongly Agree, 2- Agree, 3- Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statement	1	2	3	4	5
16. The acquisition of new skills is essential for improving our organization's overall performance.					
17. Employees who actively seek opportunities to learn and develop new skills contribute positively to our organization's performance.					
18. Our organization invests sufficient resources in training programs to enhance employee knowledge and skills, leading to improved performance outcomes.					
19. The continuous development of employee competencies through training programs positively impacts our organizational performance metrics.					
20. Employees who demonstrate a high level of expertise and skills are more effective in driving organizational performance improvements.					
21. The ability to adapt and learn new skills quickly is a key factor in our organization's success and performance.					
22. Employees who receive regular training and development opportunities feel more motivated and engaged, leading to better organizational performance.					

23. The acquisition of new knowledge and skills is essential for improving our organization's overall performance.					
24. The management provides adequate support and leadership for technology initiatives that support business operations.					

25. In your opinion, what do you think are the other approaches that could be used to enhance the skill level and knowledge of staff within the Wellcome Trust Programme.

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Section Four: Digitized Change Management Approaches and Organizational Performance at Wellcome Trust Programme.

The researcher aims to assess how Digitized Change Management Approaches influences organizational performance at Wellcome Trust Programme.. Please use the Likert scales 1-5, where 1- Strongly Agree, 2-Agree, 3- Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreementwith the statement on the left.

Statement	1	2	3	4	5
26. Digital tools have significantly improved our organization's change management processes, leading to better organizational performance outcomes.					
27. Our organization effectively integrates digital technologies into change initiatives, resulting in smoother transitions and improved performance metrics.					
28. The use of digitized change management approaches has enhanced employee engagement and collaboration, positively impacting organizational performance.					
29. Digital change management tools have helped us adapt to market changes more efficiently, contributing to improved overall					

performance.					
30. Our organization has experienced tangible benefits in terms of cost savings and resource optimization due to digitized change management practices.					
31. Employees feel more empowered and motivated to embrace change initiatives when supported by digital tools, leading to enhanced performance results.					
32. The use of data-driven insights in digitized change management has enabled us to make more informed decisions, ultimately driving better organizational performance.					

33. In your opinion, do you think there are other interventions or approaches the organization could put in place to enhance employee experience with digitized change management tools.

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Section 5: Enhanced Data Driven Decision-Making and Organizational Performance at Wellcome Trust Programme

The researcher aims to assess how Enhanced Data Driven Decision-Making and Organizational Performance influence organizational performance. Please use the Likert scales 1-5, where 1- Strongly Agree, 2-Agree, 3- Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statements	1	2	3	4	5
34. As a result of digital technology adoption, our organization effectively uses data analytics tools to make informed decisions.					
35. Digital technology adoption has contributed to, the availability of data-driven insights that has improved our organization's decision-making processes.					
36. With the implementation of digital technology, our organization					

invests sufficient resources in data governance and data quality management.				
37. Through digital technology adoption, data-driven decision-making has led to measurable improvements in our organizational performance metrics.				
38. As a consequence of embracing digital technology, the organization has invested adequate resources to train employees in data analysis and interpretation.				
39. Given our adoption of digital technologies in our operations, I feel confident that data-driven decisions contribute significantly to our organization's success.				
40. By integrating digital technology, our organization has established clear metrics in evaluating the impact of data-driven initiatives on organizational performance.				

41. In your opinion, what would be other interventions the organizations can take to enhance the use of data driven insights in enriching decision making processes?

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Section 6: Organizational Performance at Wellcome Trust Programme.

The researcher aims to assess how Organizational Performance has been impacted by adoption of digital technologies at Wellcome Trust Programme. Please use the Likert scales 1-5, where 1- Strongly Agree, 2-Agree, 3- Uncertain, 4- Disagree, 5- Strongly disagree, to indicate your degree of agreement or disagreement with the statement on the left.

Statements	1	2	3	4
42. The organization has a leadership team that is digitally savvy and drives technology initiatives that meet organizational objectives.				
43. Stakeholder requirements are gathered and used to facilitate acquisition and adoption of suitable digital technologies to meet				

business objectives.				
44. The choice of technology adopted and implemented is aligned to the organizational strategic objectives.				
45. The leadership team avails resources to support adoption of appropriate digital technologies that meet operational requirements.				
46. The adopted digital technologies have enhanced employee productivity and collaboration.				
47. Digital technologies have enabled the organization to be more customer centric				
48. There has been improved operational efficiency that could be attributed to adoption and use of appropriate digital technologies.				
49. The organization has improved its analysis and knowledge management capabilities through adoption and application of digital technologies.				
50. Digital technologies have aided in achievement and measurement of key performance indicators at Wellcome Trust Programme.				
51. Overall, the adoption and use of digital technologies have had a positive impact in achievement of organizational objectives leading to improved organizational performance.				

*****End*****

Thank you for agreeing to participate in this study

Appendix C: Budget

No.	Category	Description	Estimated Costs (Kshs)
1.	Stationery	i. Printing papers	10,000
		ii. Printing services	10,000
		iii. Binders	5,000
2.	Data collection	i. Research Assistants @ 15,000 per person	30,000
		ii. Internet services	5,000
		iii. Distribution of instruments	5,000
3.	Data Analysis	i. Software subscription for analysis	20,000
		ii. Analysis of findings	15,000
		iii. Interpretation of findings	NA
4.	Transport and accommodation	i. Transport to study sites for investigator	20,000
		ii. Accommodation as study sites are out of Nairobi (for case of interviews)	20,000
5.	Contingency	i. To address any miscellaneous costs that may arise during the study duration	10,000
Total			150,000

Appendix D: SBS Letter



26th April 2024

Mr Abud Mahsen,
mahsen.abud@strathmore.edu

Dear Mr Abud,

**RE: The Effect f Digital Technology Adoption on Organizational Performance –
A Case Study of Wellcome Trust Programme**

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2176/24**. The approval period is from **26th April 2024 to 25th April 2025**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC



