MANAGERIAL ROLES AND TECHNOLOGICAL CHANGE IN PUBLIC TRAINING INSTITUTIONS IN KENYA: CASE STUDY OF THE KENYA SCHOOL OF GOVERNMENT, BARINGO CAMPUS

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DECLARATION

This research project is my original work and has not been presented for a degree in any other University

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This research project has been submitted for examination with my approval as University Supervisor

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DEDICATION

It is my genuine gratefulness and warmest regard that I dedicate this research project to my family and my supervisor for all the support and guidance they have offered me.

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ABSTRACT

The limited ease of managerial support, ineffective communication, inadequate training, stalled stakeholder input or involvement has been zeroed in as areas of concern in change management in particular with Government institutions. This study aimed to evidence contextually by assessing the role of managers in implementing technological change in an organization at the Kenya School of Government. The study was motivated by the concern of slow and abnormal resistance witnessed with emerging technological changes aimed at transforming the performance of organization. Institutions of learning are knowledge management centred and therefore, utilization of recent technologies to stem up performance such as efficiency, employee performance, corporate relationships and internal knowledge management mechanisms is integral. The limited ease of managerial support, ineffective communication, inadequate training, stalled stakeholder input or involvement have been zeroed in as areas of concern in change management in particular with Government institutions. Therefore, this study was poised to examine the effect of environment , , managerial behaviour, and the extent to which training contributes influenced technological change at the Kenya School of Government. Resource-based Theory, Lewin's Three-step Change Theory, The Dynamic Capability Theory, Knowledge-Based Theory, and Managerial Hegemony Theory guided this study. The study adopted descriptive research design in undertaking this study. The study was conducted at the Kenya School of Government covering 178 employees who are staffers at the institution. Through, simple random sampling technique, the study sampled 50% of the target population to inform and respond to the questionnaire which is the main research instrument for data collection. The study utilized descriptive statistic design to analyse on data collected from the field. Presentation of results was in form of graphs, charts and tabulated tables with respective interpretations and discussions provided. The study found out that there is an effect of environment, communication, managerial behaviour, and training on the implementation of technological changes of institutions. The study is important to the departments, Agencies, County and National Governments in Kenya, the Council and management of the Kenya School of Government, staffers and technological service providers, academicians and researchers with interest in change management, leadership and general management of public.

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ABBREVIATIONS AND ACRONYMS

CoGs	County Governments
CUE	Commission of University Education
EU	European Union
GOK	Government of Kenya
KPIs	Key Performance Indicators
MOE	Ministry of Education
MUA	Management University of Africa
NACOSTI	National Council of Science, Technology and Innovation
NG	National Government
SPs	Strategic Plans
TIVET	Technical and Vocational Education and Training

OPERATIONAL DEFINITION OF TERMS

Communication	Refers to the descriptive and means of relaying information.
Environment	Refers to the area of residence or where a particular institution is situated.
Managerial Behaviour	Refers to the conduct or nature of managers or person in a supervisorial level.
Technology Change	Refers to the overall process of invention, innovation and diffusion of technology or processes.
Training	Refers to the self-development in enabling acquiring of skills and competencies for better service delivery.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter entails review and focus on the role of managers in the implementation of technological change in an organization. The chapter provides a statement of the problem with a clear problem for examination by the study. The chapter lists the objectives of interest by this study to examine. The chapter also provide the beneficiaries and scope of the study.

1.1 Background of the Study

Technology enhances efficiency. Organizations utilize technology to aid service delivery and production of products (Butt, Naaranoja, and Savolainen, 2016). Technologies remain dynamic, complimentary and with continuous improvement or updates with aim of perfecting service delivery or station enactment. Organizations are increasingly adopting new technologies, such as social media, that afford employees a repertoire of uses not simply focused on work, but also on socialization and entertainment opines (Mainelli & Smith, 2015). Managerial support is an important pillar in excellence of an organization (Walker, Chen & Aravind et al., 2015). Ample environment and location of an institution plays critical resilience role towards the performance of employees and more instance students learning in such institutions.

Technological change is the swift process innovation, improvement and diffusion in particular area of application (M. Li et al., 2016). Firdaus & Handriyono (2018) add that technological change is meant to instil and improve efficiency, delivery and fasten organizational process. Organizational conduct technological changes during different periods with different aims solely for increasing outcomes and stemming the performance of an institution. Role of managers plays a vital role in institutional changes and transformations. Chege et al. (2020) define role of managers as the leadership mantle or description of activities an individual in position has to deliver. Managers are in charge of planning, execution, monitoring implementation and reviewing or evaluating project or activities undertaken in their jurisdiction. Managers rely on teamwork and cooperation in success of an activity.

Too (2018) confers that institutional managers require both visible and invisible support such as experienced staff and technologies to accomplish a task. Anyieni (2017) hold that availability of resources, clear resource utilization, employment involvement and transformative leadership directly steer change management processes. The information technology capabilities, supply chain technology adoption both appear to play mediators between TQMP, SCMP, and firm supply performance. In the modern, digitalized world of the data economy, citizen-consumers are being assigned new roles: active market party, content producer, distributor, and an important source of economic value formation (Bartnik & Park, 2018a).

Mainelli and Smith (2015) posit that ICT analysts pressure firms to reverse strategic changes that are at odds with the existing "income"-focused metrics and logic that constitute the evaluative schema. Next, schema change unfolds with the ongoing technological change, as firm performance declines when measured with traditional metrics, and as managers frame strategic changes using new "growth"-focused metrics and logic (Chege et al., 2020a; Larivière et al., 2017; Lukowski et al., 2020a). Finally, a distinct shift in the schema is apparent as analysts' increasing attention to growth spurs a more positive view of strategic changes that they previously opposed, a less positive view of previously supported strategies that conformed to an income logic, and the application of the growth logic even to a firm not pursuing growth-oriented strategic changes (Antonelli & Feder, 2020).

A temporal shift toward "growth" words in analyst reports and conference calls (Islam et al., 2015). There is an emphasis of the gradual shifts in analysts' evaluative schemas that ultimately support firm responses to a new technology in managerial framing as firms facing technological change pursue strategic responses that initially diverge from stakeholders' expectations, as well as the possibility that as schemas shift, actions that initially conform to analysts' expectations may be questioned (Pusterla & Bolli, 2019). Aidoo (2020) forwards that managers are well versed in the litany of challenging conditions facing the sector. These challenges are economic, political, regulatory, legal, social, and technological (Akcil et al., 2017). Because of those pressures, the industry is experiencing increasing competition, muted growth, and an excess of capital (Lukowski et al., 2020a). The increased connectivity among household and workplace devices, the development of autonomous vehicle and the rising threat of cyber-attacks are

transforming the way people live and risk they need to mitigate with insurance products (Kakabadse et al., 2017).

The need to address changes around issues threating the growth of business environment is requisite of the managers (Antonelli & Feder, 2020). Innovation is widely considered pinnacle success influence which is highly competitive in global economy. An innovation perspective draws a clear picture of future opportunities that lie ahead (Mardiana & Daniels, 2019). Studies indicate effective management of innovation capability, which helps to deliver innovations that are more effective outcomes to generate better performance, and it would be benefits for management of the insurance companies (Aidoo, 2020; Lukowski et al., 2020a, 2020b). Scholars have identified the key factors to sustainable operations management based on human-operational-technological aspects underpinned by literature and expert's agreement (Beer, 2020).

West et al. (2019) suggest that managers can employ change management initiatives in adopting sustainability oriented human-operational-technological management practices and delivering the sustainable development goals of responsible consumption and production and affordable and clean energy in industrial supply chains. Camachon and Barbaroux (2019a) reveal that in this day and age, businesses have engrossed more to develop effective risk management practices to heighten firm performance as managers and decision makers are considering holistic view of risk management despite of silo-based context. In recent years, many organizations have improved their performance by utilizing ERM framework to manage diversified range of risks because enterprise risk management (ERM) is considered as most admirable practice in this era (Arar & Abramovitz, 2017; Mardiana, 2020).

In green economy, the concepts like sustainable design, green products, clean technologies, eco-friendly processes have pushed the organizations to opt for change management initiatives, to accomplish sustainable development (Ranängen, 2017). Organizational sustainability has been defined using a triple bottom concept that concerns with environmental issues, economic aspects, and social concerns. In this sense, it becomes imperative for organizations to appraise the role of human, operational and technological aspects for setting sustainable business practices in a

supply chain context. Sustainable operational practices will deliver the products to the society having zero defects and zero effect to the environment (Gureva et al., 2016).

In Africa, government institutions are known to fail to meet their KPIs and even strategic planning. George et al. (2016) confers that public institutions fail to meet their annual project deliveries and internal changes due to underfunding and constrained systemic government protocols. Large scale climate change projects involving technological changes are resource intensive and have to meet environment settings to effect production of products and delivery of services (Gibon et al., 2015). In Kenya, Kario & Ngugi (2017) observed that change management is resistance sensitive however, clear managerial approaches and employment involvement leads to effective changes.

Resource-based Theory, Lewin's Three-step Change Theory, The Dynamic Capability Theory, Knowledge-Based Theory, and Managerial Hegemony Theory guided this study. Resource-based theory envisions the need for adequate resources to undertake a change in an institution. Lewin's Three-step Change Theory explains the core processes involved in an organizational or management change (Tan, 2006). Dynamic capability theory similarly to systems theory endeavours to add insight to this study by explaining the human capital and competence abilities needful to undertake a particular task (Aitken, 2010). Stakeholders' theory explains the role external input in terms of manpower and resources, invisible insights by like parties play to stem performance and excellence of an organization (Mabin et al., 2001). Managerial hegemony theory outlines the qualitative elements of a manager tasked with providing organizational leadership and guidance. Therefore, this study aimed to investigate the role of managers in implementing technological change at the Kenya School of Government, Baringo Campus.

1.1.1 Environment

Organizational change and innovation is realized on the premise of fair interaction between the environment where an institution is situated (Korb et al., 2016). For instance in China, agricultural productivity has been immense owing to the transferability of institutional environments into innovative bays therefore, necessitating growth in agricultural enterprise (Cheng et al., 2020a). The mix of formal and informal institutions on the basis of institution-

behaviour-performance is core in promotion of interaction between innovative power and technical executive power (Anyieni, 2017). All companies have the compelling need to meet the demands of their employees, shareholders, responsiveness to suppliers and need to contribute to the communities as a corporate support or activities in form of CSR (Kagendo, 2015). Stakeholder theory holds that all parties have right to equitable treatment or in preference of their contribution to the success and performance of the company. Therefore, firms either act responsibly, invest in Corporate Social Responsibility activities, pay all payables in time and operate in commitment to meeting employee needs that they will achieve an all high-performance scale (Ang & Wambui, 2014).

Drawing on the experience of major multinationals world-wide, Anyieni (2017) explored the process of crisis development, management and resolution in a wide range of businesses. Key methodology dependent on an intensive comprehension of the association and its current circumstance is a descriptive of a manager's role. Kurer and Gallego (2019) pointed out that the chief executives' perceptions and attitudes towards crisis management reflects in their student managers and how to handle crises, the art of planning, and how to mix risk and uncertainty in management. It is therefore, needful for strategic management actors to find other better approaches of handing crises, planning, instituting recovery strategies, and employing internal and external strategies for systemic performance (Vezzoli et al., 2015).

Too (2018) argues out that policy interventions by governments to alter the structure of economic activity have either been dismissed or overlooked by operations management (OM) scholars. However,Chen et al. (2015); Vassilakaki and Moniarou-Papaconstantinou (2015) argue that in recent years, such 'industrial policy' measures have gained increasing support in developed economies, particularly in relation to manufacturing. As such, it can be enhanced by industrial policy interventions that prevent systems failures in the process of turning technological innovation into commercially viable products (Kurer & Gallego, 2019). In particular, we argue that this can be achieved by establishing non-firm, intermediate research organizations and by other measures to change the institutional architecture of an economy (Cheng et al., 2020b). The need for operational managers to broaden their conceptual scope to encompass active engagement with non-firm network participants such as government-supported

intermediate research organizations, and that, as well as learning to be effective users of industrial policy, OM practitioners and academics should engage actively in the development of industrial policy (Vassilakaki & Moniarou-Papaconstantinou, 2015). Thusly, high-esteem, high-profitability assembling can be practical in significant expense monetary conditions.

1.1.2 Communication

Seamless communication in an organization vitally improves the connectivity and relations of occupants in an organization (Kimosop et al., 2016b). The robustness of the institutional environment is a requisite factor for the growth and development of a firm. Training of staff and continuity knowledge management in an organization contributes to modernization and co-existence with recent developments in the area of specialization. Stakeholders, clients and parties related to staff and students remain integral part of an organization in terms of resource support, external input, corporate image and influencing or perfecting corporate culture of an organization (Kavanagh & Ashkanasy, 2006). Such is evidence is with public training institutions that are core knowledge cum resource pillars for Governments.

The proliferation of information technology (IT) at the workplace constitutes an extraordinary opportunity for access to information and new ways of working. Eggers and Francis Park (2018) argue that modern education requires technological facilities and technological applications but some educational organizations do not care about technological requirements. Modern life requires technological base and technological equipment but many educational organizations ignore requirement of technology in education (Bartnik & Park, 2018b). Modern life is based on technological base and most of people use technology in their business and in their daily lives. Economic sectors work with technology and educational organizations naturally have to work with technology too (Glover et al., 2019). Because of requirement technology, everybody has to learn to use technology and educational organizations have to own all technological facilities to teach (Kiene, 2020). Communication is the base of life and almost all people use communication technology. The problem is that many people do not aware of details of communication technology or do not use technology correctly technological facilities and technology use has to be taught in communication schools or in communication departments.

The direction and rate of technological change in the global economy exhibit contrasting trends. Since the end of the XX century, the rate of technical change measured by productivity growth has been stronger if its direction is more labour-intensive (Aremu et al., 2019). Aremu et al. (2019) maintain that structural complexities and the intrinsic dynamism of science and technology pose challenges to policy makers, but they seem almost manageable compared with the challenges posed by extrinsic forces. Among these are the complex processes of globalization and the impact of global economic development on the environment (Kagermann, 2015a). The latter, expressed quite generally through the concept of ‘‘sustainability’’ is likely to be a component of much twenty-first-century innovation policy (Rajapathirana & Hui, 2018).

Development policies that destroy economically important environmental systems, contribute to harmful global change, and undermine the natural resource basis of the economy are bad policies (Rajapathirana & Hui, 2018). Proportions of advancement, seriousness, and development need to incorporate maintainability measurements to be sensible as time goes on. Consumer resistance is one of the major causes of failure of any innovation (Eggers & Francis Park, 2018). Notwithstanding rising scholarly intrigue, the non-reception of advanced development or shopper opposition has gotten less academic consideration when contrasted with the elements driving the selection of computerized items and administrations. The existing research on consumer resistance is also in siloes, running across multiple verticals, spanning from resistance to green products to the Internet of things (IoT).

1.1.3 Training

Barbalho et al. (2019) argue that training organizations are deemed sources of information owing to their intensive and extensive continuous research and development in empirical and theoretical aspects. Governments pump resources to learning institutions with an aim of increasing knowledge management, developing and inculcating new developments, policies and or internal mechanisms instrumental to the development and welfare of Government and private sector employees (Wanza & Nkuraru, 2016). Managers of Government organizations are implementers of decisions and policies of Governments. Institutional responsiveness to change is important in aiding performance or meeting key performance indicators (KPIs) (Nicholas, 2017).

In times of hastening innovative change, officeholder labourers should consistently refresh their aptitudes to stay beneficial interestingly; youthful alumni who just entered the work market regularly obtained current abilities in school or University (Diéguez-Soto et al., 2018). Ziadlou (2020) observed that the modern market challenges and global globalization processes make the small and medium enterprises (SMEs) constantly search for new opportunities for development and adjustment to the environment, as well as improve the quality of products and services. Managerial innovation is an efficient tool for improving the performance of SMEs, as they allow creating the necessary conditions for the implementation of the product and technological innovations and underlie the organization of innovation (Gibon et al., 2015).

In the wake of technology consumption and utilization at work places, limited studies have contextually revealed the mix between technological transformation, labour productivity, knowledge management, capacity building and contribution towards the performance of institutions (Smith, 2014). Following human capital theory, firms invest in training when expecting higher returns than costs, and therefore, this informs why investment in staff who undertake high skilled worked are better placed to influence the performance of an organization. Studies suggest that firms with a higher proportion of digital technology users provide more training (Anyieni, 2017). On the contrary, more working time spent with digital technologies is associated with less training. A potential explanation could be that after initial training in using digital technologies, there are substantial learning effects and employees become more experienced (Cheng et al., 2020b). Additionally, employees who more frequently perform complex tasks receive more training independent of their jobs' general skill requirements.

Sustainability through training is now an international issue because the scale of development and the globalization of economies have environmental and natural resource implications that transcend national borders (Rajapathirana & Hui, 2018). Gibon et al. (2015) argue that from the policy point of view, globalization is a not a new phenomenon. Science has been globalized for centuries and we ought to be studying it more closely as a model for effective responses to the globalization of our economies (Rogério dos Santos Alves; Alex Soares de Souza, 2014). The intensity of open correspondence in science cannot be overestimated. It has established, uniquely among human endeavours, an absolute global standard (Bartnik & Park, 2018a). Moreover, it

pools adequate talent sustainable to offer labour productivity in different zones. This has largely contributed to improved knowledge management systems, comprehension of corporate cultures and shaping employee direction. Some examples of open system innovation are the science and there has remained a huge reception from other social, economic and political quotas.

1.1.4 Managerial Behaviour

In today's business environment, change has become an everyday part of organizational dynamics and any resistance from employee can cripple an organization (Smith, 2014). All together to have a superior comprehension of the term hierarchical hostility, it is critical to take a gander at the definition first. Tan (2006) defined resistance to change as "Behaviour, which is premeditated to shield a person from the impacts of genuine or envisioned change". Another researcher Düren (2006, pp. 32) defined resistance as: "Employee behaviour that seeks to challenge, disrupt or invert prevailing assumptions, discourses and power relations". Indifference of leadership styles adopted by managers is reflected in their outcome.

Corporate image and internal employee retention instrumentally plays vital role in the admiration or and success of an organization (Kagermann, 2015a). Institutions with lag in technological implementation record slow service delivery and poor outcomes. Gibon et al. (2015) opine that management and organizational performance define the success of an institution. Effective planning and execution process fasten the implementation of planned project or strategic activities (Barbalho et al., 2019). Managers with transformative focus, technology friendly and adequate resources witness early institutional changes stemmed for growth and improved productivity. Government institutions are known with underfunded and slowed change processes in implementing technological and management changes.

Tregua et al. (2019) proclaimed that resistance to change is alive and well and may be viewed from two different angles, such as attitudinal and behavioural responses to change. Resistance is defined as a phenomenon, which can deter the overall change process, by either delaying or slowing down its beginning, obstructing or hindering its implementation, and increase its costs (Ansoff, 1990). According to Leiber et al. (2018), employees aren't really resisting the change, but rather they may be resisting the loss of status, pay, or comfort. Del Giudice et al., (2018) but

rather they may be resisting the loss of status, pay, or comfort. Del Giudice et al., (2018) offered six essential purposes behind protection from surface in the event that: I. the idea of the change is not made clear to the individuals who will be affected by the change, ii. the change is available to a wide assortment of understandings, iii. those affected feel solid powers discouraging them from evolving, iv. individuals affected by the change have compel put on them to make it as opposed to having a state in the nature or heading of the change, v. the change is made on close to individual grounds, and vi. the change overlooks the effectively settled establishments in the gathering.

Lower organizational resistance is expected to increase implementation success over the critical success factors (Doppelt, 2004). In a recent study on impediments to successful ERP implementation Chang (2016) found five critical impediments which were in order of criticality; conflict of interest, inadequate human resources commitment, lack of organizational change management expertise, business processes not redesigned to take advantage of ERP, and resistance of users. Resistance to change is but a manifestation of cultural values and cultural strengths (Al Adresi & Darun, 2017). Imprinting out impediment is about like getting rid of corporate culture: conceivable, however perhaps terminal. They also concluded that resistance is an artefact of corporate culture and is largely unconscious (Meglio et al., 2017). Nejati et al. (2017) add that due to this nature, resistance and cultural variables generally are hard to discern. To facilitate a smooth ERP implementation, organizations must be competent in effective change management that involves all the affected personnel to accept the introduced changes as well as manage any resistance to them (Kagermann, 2015a).

1.1.5 Overview of Kenya School of Government-Baringo Campus

The Kenya School of Government Act (No. 9 of 2012) established the Kenya School of Government (KSG). The School is the successor of the former Kenya Institute of Administration (KIA), Kenya Development and Learning Centre (KDLC), and the Government Training Institutes (GTIs) Mombasa, Matuga, Embu & Baringo (Kenya School of Government, 2020). Kenya School of Government is a State Corporation established to offer management training, research, consultancy, and advisory services to the public sector. The School has been instrumental in setting up fast track management strategies through the observance of high

standards of integrity, competence, ethics, and a culture of transparency whilst implementing the provisions of her mandate.

Today it offers services to both National and County governments, private sector players as well as those from the Non-Governmental Organizations (NGOs). The school is well served with a good road network and can be accessed through Nakuru-Kabarnet road (about l40kms) or Eldoret-Kabarnet road (about 90kms) (Kenya School of Government, 2020). KSG is ISO 900 1:2008 Certified (Kenya School of Government, 2020). In maintaining the certification, the school's legally binding commitments incorporate persistent improvement through constant reviews, preparing and enhancement for quality. This requires both money related and different assets. The choice of the school for examination by this study was that the researcher is that it has undergone a series of technological changes in the recent past and that the researcher is a member of staff of the school.

1.2 Statement of the Problem

The turbulent nature of the business environment is increasing with the complexity in solving problems and making accurate decisions (Treem et al., 2015). In response, system thinking has been considered as a potential solution that offers a comprehensive understanding of organizational structures. Addressing problems in complex systems requires not only technical and business knowledge but also years of managerial experience (Islam et al., 2015). Facing competitive competition, external and internal challenges, encouraging companies to make change management, both structural change, technological change and people change (Stone et al., 2015).

The success of management change ensured an expanding representative inspiration in work. A manager must have managerial skills and technical skill to determine the right policies and strategies (Larivière et al., 2017; Mainelli & Smith, 2015). Managerial skills were able to convince motivated employees to participate in realizing the Organization’s goals. In the recent past, there remains a concern with slow and abnormal resistance witnessed with emerging technological changes aimed at transforming the performance of Government or public institutions. Institutions of learning are knowledge management centred and therefore, the

minimal and slow utilization of recent technologies to stem up performance such as efficiency, employee performance, corporate relationships and internal knowledge management mechanisms is integral. The limited ease of managerial support, ineffective communication, inadequate training, stalled stakeholder input or involvement has been zeroed in as areas of concern in change management in particular with Government institutions.

Studies Kimosop et al., (2016b), Valentine (2017), Too (2018), Buya et al. (2018) reviewed evidence conceptual findings and therefore, need to provide contextual evidence on the role of managers in implementing technological change is probable by this study. It is there the need for this study to have assessed the role of managers in implementing technological change in an organization at the Kenya School of Government.

1.3 Objectives

The main objective of this study was to assess the role of managers in implementing technological change in an organization at the Kenya School of Government.

1.3.1 Specific Objectives

This study was guided by the following specific objectives:

i. To examine the influence of environment in implementing technological change at the Kenya School of Government.
ii. To assess the extent to which communication affects the implementation of technological change at the Kenya School of Government.
iii. To establish how managerial behaviour affects the implementation of technological change at the Kenya School of Government.
iv. To find out the extent to which training contributes to the implementation of technological change at the Kenya School of Government.

1.4 Research Questions

i. What is the effect of the environment in the implementation of technological change at the Kenya School of Government?

ii. To what extent does communication affect the implementation of technological change at the Kenya School of Government?
iii. How does managerial behaviour affect the implementation of technological change at the Kenya School of Government?
iv. To what extent does training contribute to implementing technological change at the Kenya School of Government?

1.5 Significance of the Study

This study remained significant in many ways.

Government organizations stand out as the main beneficiaries of this study. This is because most of them seek to gain direct support and offer services to the public. Also, they would need to assess the effectiveness of their strategies employed to gain resource support, as well as gain, informed empirical results on the current performance of the public sector. Institutional managers in charge of strategy and planning will find results of this study important in adding value to their rolling basis decisions and products/service launch or consumption increment in the corporate sector.

Regulation brings forth sanity and streamlines operations of a sector. Such is the education and consultancy or public sector, therefore, as the main administrators of Government institutions, they will find the results of this study important. This study sought to assess the organizational environment, communication, managerial behaviour and training culture within, innovations founded, available resources and how the leadership contributes to technological change in government institutions, which will inform administrators on the characterization of the sector. This will ease the administrators' operations and enable understand current dynamics and effective strategies employed in the sector contribute to the overall sector play. The Government will also find this study important in their funding, structural arrangement and in the push to enhance a fair and ample business climate for government organizations.

Stakeholders offer resource support to Government institutions in terms of financial and capacity building. Stakeholder involvement is a resourceful management strategy, which enables institutions to anchor external input for their performance, and therefore, this study will evidence the support in aiding technological support. Also, the study will evidence the support KSG has gained from stakeholders in their process of implementing change.

Policy formulation and implementation are continuous in every Government and institution. Institutions employ different policies aimed at streamlining their operations whereas Government employ policies to ensure smooth operations and fair playground for government organizations as well as induce productivity in the sector. Therefore, policy formulators will find the results of this important in their formulation and execution of different policies and might enable review policies that constrain the sector.

The academic world and researchers into strategy and planning will find results of this study very useful in adding to existing concepts, developing literature as well as provide a critique. The outcomes of the study will add value to the principles of strategic management and planning aspects of the modern world of managing organizations. This study will also remain useful to the research and academia world as it will provide areas for further research and or additional investigation to generate adequate literature for other scholars in the respective fields.

1.6 Scope of Study

The study examined the role of managers in implementing technological change in an organization at the Kenya School of Government. The study examined the effect of environment, communication, training and managerial behaviour as core factors affecting the role of managers against the technological change at the Kenya School of Government. This study was conducted in Baringo County at Kabarnet where the Kenya School of Government has a campus. The study adopted a descriptive research design in undertaking this study. The study targeted 178 employees who are staffs at the institution. The study covered a period of four months from May to September 2020.

1.7 Chapter Summary

This chapter introduces the study in the background, provides an overview of KSG, and states the statement of the problem. It also lists the research objectives and questions under examination. The study also offers a significance of the study and the scope of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter is divided into various sections, are the theoretical framework, conceptual and empirical literature review, critique of literature, and research gaps. The section will show the relevance of the theories to the objectives of the study. Further, the section will critique and identify gaps to be filled by the study.

2.1 Theoretical Literature Review

This section seeks to review the theoretical foundation of the studies. Theories are different schools of thought which provide a reasoned thinking on how things unfold in nature. They give meaning and explanations as to how and why things happen the way they do. They are used here to explain the interdependence among concepts. The prediction of each theory with respect to the behavior of the study variables, as well as its major weakness have been articulated in this part. In this study, resource-based theory, Lewin's Three-Step Change Theory, the dynamic capability theory, knowledge-based theory, and managerial hegemony theory.

2.1.1 Lewin's Three-Step Change Theory

This theory is established a three step change model. The theory visualized behaviour as an active balance of forces that work in opposite directions. Driving forces facilitate change because they push employees in the desired direction. Restraining forces hinder change because they push employees in the opposite direction. The driving forces promote change as they usually propel personnel in the desired direction. The restraining forces impede change as they propel personnel in the dissimilar direction (Lewin, 1980). For that reason, it is important to analyse these forces and Lewin's three-step model helps in moving the equalization toward the arranged change Lewin maintained that the initial step in changing behaviour is to unfreeze the status quo or prevailing situation. The existing situation is deemed to be the equilibrium state. The status quo is considered the equilibrium state. Unfreezing is necessary to overcome the strains of

individual resistance and group conformity. The unfreezing also prepares people to acquire or learn new behaviour. According

Unfreezing is required to eliminate the struggle of individual resistance and group conformance. Unfreezing is commonly accomplished by using three techniques. First, by increasing the driving forces that guide behaviour away from the equilibrium state (Pettigrew et al., 2001). Second, by decreasing the restraining forces that oppose the movement from the status quo. Third, by finding a mixture of the two techniques identified above. Several actions facilitate the unfreezing step and they include: motivating the participants by training them on the proposed change, building confidence and awareness for the need to change and active participation in identifying obstacles and discussing solutions in a group setting (Dickson & Tholl, 2014).

The second step of Lewin's change model is movement. This step entails the shifting of the current system to a new equilibrium state. Three actions aid the movement step, they include: changing the perspective of the employees by convincing them to acknowledge that the prevailing situation is not beneficial to them, working together in developing new data and linking the views of the team to admired leaders that support the change.

The third step of Lewin's change model is refreezing (Beerel, 2009). Refreezing must be executed after successful change implementation for the new equilibrium state to be sustained over time. If refreezing is not done, there is a high chance that the implemented change would temporary and the employees will return to the old equilibrium. It is the final integration of the new standards into the organization's values, processes and practices. The goal of this step is to stabilize the new equilibrium as a result of the change by neutralizing both the driving and restraining forces (del Socorro Hubbard & Tawfik, 2020). The strategy used to implement the refreezing step is to reinforce new standards and integrating them through informal and formal mechanisms including systems and policies (Menaker, 2009). Therefore, Lewin's three-step model demonstrates the impact of forces that either facilitate or impede change. In brief, the theory holds driving forces facilitate change and restraining forces impede change. Therefore change will occur when the magnitude of one force is greater than the magnitude of the opposing set of forces.

2.1.2 Resource-Based Theory

Wernerfelt in 1984 initially developed the resource-based theory. The resource-based theory centres in the application of varied valuable resources readily available in the organization. According to Menaker (2009), organizational resources are the main inputs for any desired outcome. Pettigrew et al. (2001) further add that the resources of any organization are classified as either tangible or intangible. The theory maintains that resources and capabilities are often synergistic in nature and can be more valuable when combined. RBT proposes that firms have different resource endowments and that the manner in which they require, develop, maintain, bundle and apply them lead to the development of competitive advantage and superior performance over time. RBV tenets prescribe that resources and capabilities, for instance bundle of resources need to be valuable, rare, inimitable and organizationally utilizable, for example a firm has complementary resources to leverage and maximize capabilities to drive sustainable competitive advantage. According to Wernerfelt for organizations to develop viable strategies, it has to check on its resources, which enables the implementation of the identified strategy.

This theory states that the strategic resources' possession provides organizations with a golden chance of developing competitive advantages over their competitors. The theory is thus crucial for this study since it stipulates the influence of organizational performance which according to the theory is influenced by strategic resource capabilities (Choromides, 2018). For organizations to set their resource capabilities at par, they must invest in strategic change management practices, which will help them not only to survive in business but also to grow to corporate sector leadership positions in the industry. It is the aspiration of every organization to achieve competitive edge for survival and growth.

This theory's strength is that it promotes resource uniqueness to ensure that a sustained competition platform is created. Mabin et al. (2001) add that the critique of resource-based theory emanates based on it lacking enough management implications as well as operational validity. Also, the theory is criticized of instructing management towards the development of unique resources with silence on the methodology of doing so (Ali-Hassan et al., 2015; M.

Aslam, 2015; Dustdar et al., 2008; Tálamo, 2008). This theory explains the need for resources to aid technological changes, which is resource intensive.

2.1.3 The Dynamic Capability Theory

In 1997, David Teece, Gary Pisano and Amy Shuen proposed the Dynamic Capability Theory. Dynamic capability is an organization's capability to integrate, build, and reconfigure internal and external competences to cater for rapidly shifting environments (Pettigrew et al., 2001). According to this theory, an organization should advance its competences in a dynamic setting by utilizing peripheral company-specific proficiencies (Bogers, 2012). Based on the foregoing theoretical postulation, authors such as Berdine et al. (2008) have come to a conclusion that it is evident that the organization-specific resource positions and evolutionary pathways outline the company‟s administrative and an organization developments which subsequently explain competitive advantage of such an organization. The weakness of dynamic capabilities theory is that it overly assumes that there exists an equilibrium point of dynamic capabilities and that such a point ought to be the focus of a rational strategist. The underlying assumption of the dynamic capability theory is that one should use core competencies to modify short-term competitive positions that can be used to build a longer-term competitive advantage. The term 'dynamic' refers to the capacity to renew competencies so as to adapt to the changing business environment (Choromides, 2018). The word 'capabilities' emphasizes the fundamental place of strategic management in correctly adapting, integrating and reconfiguring internal and external organizational resources, skills and functional competencies to meet the requirements of a changing environment (del Socorro Hubbard & Tawfik, 2020).

The dynamic capability route lays emphasis on an organization's capability to renew its resources as per environmental changes. Dynamic capabilities entail the Organization's capability to change the resource base by creating, recombining, integrating and releasing resources (Rich, 2016a). According to Kavanagh and Ashkanasy (2006), the Dynamic Capabilities Theory identifies two key areas that should be addressed in an organization. The first one is how senior managers of successful companies change their existing mental models and paradigms to adapt to radical discontinuous change. The second item is how organizations

maintain threshold capability standards. Therefore, there is need to show the role of managers in the implementation of technological change at the School of Government.

2.1.4 Knowledge-Based Theory

Wernerfelt, Barney, and Conner in updating the resource-based view theory. This theory regards knowledge as the most strategically important resource of an organization. Its proponents argue that because knowledge-based resources are often not easy to imitate (Parker et al., 2013). This theory postulates that knowledge is the only resource that provides sustainable competitive advantage, and therefore attention and decision-making should focus primarily on knowledge and the competitive capabilities developed from it. The key contribution of the knowledge based view is the assertion that knowledge can be managed as an organizational resource that in turn, hopefully, constitutes competitive advantage. These knowledge bases are socially complex. They are contributing factors of sustained competitive advantage and superb corporate performance. Under this strategy, the task of a departmental head is to acquire and retain valuable knowledge (Leonard et al., 2013). Advocates of the Knowledge-Based Theory maintain that the ability to replicate knowledge determine an organization's growth rate (Hafford-Letchfield, 2009). The duplication also permits imitation by competitors.

Organizations can grow and prevent competitive imitation only by continuously recombining their knowledge and applying it to new corporate sector opportunities. There are three characteristics of the Knowledge-Based Theory. These features affect its strategic value. First, integration is efficient. The second one is the scope of integration while the last one is the flexibility of integration (Leonard et al., 2013). There is need to investigate how new knowledge is formatted with the existing knowledge formats. Therefore, there is a need to show the role of managers in the implementation of technological change at the School of Government.

2.1.5 Managerial Hegemony Theory

Mallete & Fowler proposed the managerial hegemony. Managerial hegemony theorists' basic principle was that "corporations have governing boards used by professional managers to support and validate their decisions (Aitken, 2010). Managerial hegemony theory indicates that a class of professional managers runs the modern corporations and that it is those managers, not the board of directors, who make all the strategic decisions" (Herold et al., 2008). According to this theory,

"corporates boards are legal fictions which are ineffective in averting conflicts between management and stakeholders in spite of the powers conferred on them to realize the same". The theory emphasizes the role of agents in support of the agency theory, but focusing on the organization structure viewpoint (Hafford-Letchfield, 2009). Managerial hegemony theory suggests that "boards of directors will not get involved in strategic decision-making independent of management and conversely that professional managers will resist calls for board involvement in strategic decision- making" (Doh & Stumpf, 2005).

Managerial hegemony theory supports the perspective of agency theory that recognizes the shareholders in a corporation (Lewin, 1980). Therefore, the approach is relevant to this study as it introduces the shareholders, board of governance and the managers as the stakeholders in the state corporations. According to Rich (2016), " the board in state corporations does not have the power to carry out its duties. It is merely reduced to a rubber stamp institution for management with decisions originating from not only the executives but also politicians and managers"; where the performance of the corporations may be adversely affected. Thus, this theory is applicable to assess the role of managers in implementing the technological changes at the Kenya School of Government.

2.1.6 Dimensions of Technological Change

Glover et al. (2019) postulates that from its inception, technology change has caused divergent views about its effects on teaching and learning. One of the most important categories of standards that are relevant to technological innovation is types of technology elements that standards are associated with (Aslam et al., 2020). Technology standards have different strategic and marketplace roles depending on categories of technology involved, hence different rationales for and the processes by which standards are set. Therefore, it is important to differentiate between standards for different categories of technology elements, before discussing their roles and functions. According to Petrou et al. (2018), standards can basically be delineated between product and nonproduct standards, which are distinctly different in terms of their relationships to product structure and public good content.

Product-element standards typically involve one of the key attributes of a product, conveying direct competitive advantage to the owner of the technology producing those attributes (Ali-

Hassan et al., 2015). They can be related to either generic or platform technologies, i.e. the fundamental technical concepts derived from basic science for specific product innovations, or proprietary technologies, i.e. actual market applications developed by companies derived from platform technologies. Nonproduct standards, on the other hand, derive from a different technical base from that of product's attributes; so called infratechnologies-that provide varied and critical technical infrastructure support for the development of generic and proprietary technologies-for such standards have large public good content, hence require both industry and government investment.

Measurement and test methods, interface standards, scientific and engineering databases, and standard reference materials are examples of infratechnologies frequently embodied in nonproduct standards; they tend to be competitively neutral, yet critical to the entire industry's efficiency (Glover et al., 2019). "These product and nonproduct standards at the product level interact with each other to create a system composed of various technology elements" notes Treem et al. (2015). Along with these standards for various categories of technology elements, Lukowski et al. (2020) describes how subsequent production, commercialisation, and market development are all affected by standardisation. In addition, he notes that as technologies are becoming increasingly complex, system design will also drive standardisation simultaneously with standardisation at the product level.

"Standards are ubiquitous technical infrastructure affecting all stages of technology-based activity, with complex interactions between and across various types of technology elements" argues (Kagermann, 2015b, pp17). It is also important to note that such interactions between standards and technology elements should not be understood as linear or static, but more of dynamic processes. "With new technologies continuously being introduced and system elements evolving at different rates, standards also need to be revised for updated interfaces at different points in time. It is a dynamic, living process with a constant dialog about technology elements and how limited common implementations of technology may be useful to spur innovation and market development As a result, such interactions and activities are also influenced by when standards are developed and introduced, as well as why standards are needed to support technological innovation" argue (Ali-Hassan et al., 2015).

Bartnik and Park (2018) note “it appears that different types of standards with different roles and functions are needed for different categories of technology elements to achieve their efficient development and utilisation.” Although standards have been often considered as homogeneous collection of decisions regarding economic activities, there are in fact, different standards developed for various, even multiple or contradictory, purposes, depending on the type of technical knowledge they codify (Hwang & Shin, 2017). It is therefore necessary to define various types of standards according to their basic roles and functions in innovation, to discuss mechanics of each generic function along with their complex interactions with technology and other innovation activities. According to Ali-Hassan et al. (2015), “technological change standards can be categorised into five basic types according to their roles and functions. Terminology and semantic technological change standards define common language and definitions to facilitate efficient communication among various stakeholders.”

Compatibility and interface technological change standards specify properties that a technology must have to be compatible (physically or functionally) with other products, processes or systems (Mardiana & Daniels, 2019). ”Variety reduction technological change standards are designed to limit a certain range or number of characteristics such as size or quality levels, for economies of scale and users’ confidence” argue (Gibon et al., 2015). It is remarkable to note that these various types of technological change standards also play an important function of knowledge diffusion between different innovation actors.

Transferring new knowledge between and across various stages of technological innovation, technological change standards “help bridge the gap between research and marketable products. According to (Spring et al., 2017), technological change standards with different roles and functions are needed at different times and stages of innovation processes. Based on the linear process of technological innovation and development, they propose a framework which distinguishes various roles of different types of technological change standards at different phases of the innovation from basic research to diffusion into the market (Green, 2017). Much other academic literature has also noted the importance of appropriate timing of the development and introduction of technological change standards, for them to perform intended purposes. Early

standardisation forestalls diversity, but precludes experience with the alternatives, limiting the ability to further innovate; whereas late standardisation allows further technical improvements, but may yield confusion, making it more difficult to achieve economies of scale and scope (Treem et al., 2015).

Proposes that standardisation is a "complex dynamic of the trade-off between waiting for a better technology against the costs of delaying the benefits of adoption." Therefore, standardisation on a timely basis is crucial for effectively supporting technological innovation; due to cumbersome procedural requirements of formal technological change standards organisations and fast pace of modern technology development, anticipation and strategic planning of standardisation promptly is essential to achieve this. To meet the expected needs of users appropriately, successful technological change standards should consider both real-time and timing relative to technology lifecycles. Although it is difficult to understand more than a posteriori relationship between technological change standards and market development, intrinsic capabilities of the technology help observe what types of technological change standards mayor should appear at different stages of the technology lifecycle throughout the innovation journey. According to Bechky (2020) framework, anticipatory technological change standards are generally specified at the introduction of the technology. As they define new concepts, features, components, and tools needed to proceed with trial implementations, anticipatory technological change standards are essential for widespread acceptance of a device or service. They are also crucial for the interoperability of communication systems, hence there are many anticipatory technological change standards related to Information and Communication Technologies (ICT).

However, anticipatory technological change standards may include irrelevant details leading to increased complexity, particularly when the market requirements are unclear or ill-defined. Therefore, for anticipatory technological change standards to be effective, their scope and objectives should be well-defined, offering a minimum set of features to stimulate the market (Bartnik & Park, 2018b). Participatory technological change standards proceed in lockstep with implementations for refinements and definitions of the production systems that embody the technology; hence, they are often generated while the performance of the innovation is improving, the technical knowledge is diffused, and initial products are commercialised.

Examples of participatory technological change standards can be technological change standards specifying the behaviour of application systems to ensure a flexible evolution of the whole ensemble to a new state of operation. Participatory technological change standards can spur incremental innovation, and a widespread interactive environment, such as the Internet, is helpful for their development (Bechky, 2020).

Finally, responsive technological change standards are developed towards the tail of technology lifecycles, as they relate to the manifestation of a "completed and connected set of transformational technology systems used in communicating and transacting operations within and between producer/customer/supplier networks" (Chege et al., 2020b). They codify a product or service that has already been sold with some success, or define the expected quality of a service and performance level of the technology; hence, offer a systematic way to distil scientific information and provide avenues for sharing best practice technical know-how. However, waiting too long for responsive technological change standards may encompass the danger of incompatibility and difficulty of reaching consensus, as happened with the multiplicity of television transmission technological change standards. It is difficult to draw a clear-cut line between anticipatory, participatory, and responsive technological change standards; a large number of technological change standards are typically a mixture of two or more (V. Thakur & Mangla, 2019). Such characteristics make the management of standardisation activities even more challenging. It is also important to note that there may be multiple technology lifecycles for multiple component technologies that make up larger technological systems, or even new technology lifecycles replacing those of old technologies or systems. Hence, the issue of timing relative to technology lifecycles should be distinguished from the timing of technological change standards in terms of real-time.

Along with the timing issue, content and flexibility of technological change standards are also important factors for the efficient innovation and market penetration of technologies, as initial technological change standards can be hard to modify or update due to time and cost requirements as well as installed-base effects (Mardiana & Daniels, 2019). Therefore, it is essential to consider carefully the level of risks and uncertainties to be managed by standardisation; there are various technological change standards options to strategically manage

such risks, according to the level of consensus and form of specification. For technological change standards developed by formal SDOs, there are various kinds of deliverables depending on the level of consensus achieved in standardisation as well as the level of uncertainty in technical solutions.

European Norms (EN) and International Technological change standards (IS) are developed for topics with the highest level of maturity and a high degree of consensus among various member countries. For topics that meet certain criteria, but are still under development or which have not reached a sufficient consensus, documents such as Technical Specifications (TS), Publicly Available Specifications (PAS), or International Workshop Agreements (IWA) are generated (V. Thakur & Mangla, 2019). Depending on the form of specifications, technological change standards can also be distinguished between performance technological change standards and solution-describing standards. Performance technological change standards specify desired outcomes or performance levels, allowing flexibility in product or service design while still meeting the performance requirements of the standard; for example, minimum technological change standards of quality and safety for products may be specified to promote greater consumer protection.

Finally, technological change standards can be also categorised by who is leading or involved in standardisation activities. Before discussing the issue of stakeholders, it is necessary to first distinguish technological change standards between de facto technological change standards and de jure technological change standards, according to their origins in the market place or the strategic efforts of recognised SDOs (de Sousa Jabbour et al., 2018). Nowadays, the distinction between de facto and de jure technological change standards seems to be blurred in many domains of technologies especially in ICT, yet it appears that the main question arises as to whether there is an official organisation leading the formal, collective, and open process of standardisation, engaging various stakeholders involved (Rajapathirana & Hui, 2018). Technological change standards can be developed by entities and organisations at different levels, with various degrees of consensus in their preparation and approval; such SDOs leading standardisation activities also have different expertise and focus, depending on their nature and characteristics.

The issue of who is developing technological change standards or leading standardisation activities is also related to the issue of public intervention and the role of government in standardisation. This is because technological change standards, as technical infrastructure with strong public good content, are considered to be powerful non-market mechanisms that governments could use to foster technological innovation (de Sousa Jabbour et al., 2018). There are various modes in which the government or other public agencies can engage in technological change standards development, including convenor, coordinator, technical leader, participant, facilitator, implementer, funder, and technical advisor. Depending on which organisation is leading technological change standards development, roles of the government (if any) and modes of public engagement would need to vary for effective management of standardisation activities.

Different organisations leading technological change standards development have not only different standardisation missions and contributions but also different participation of stakeholders. Several literature scholars also highlight the importance of various stakeholders involved in actually developing and writing technological change standards, and how it evolves across different stages of the innovation process (Glover et al., 2019). Aremu et al. (2019) note "successful innovation is made possible only by a network of actors from industry, finance, research, and government whose interests are mediated through technological change standards. Therefore, to achieve effective anticipation and strategic planning for standardisation in support of innovation, it is imperative to be able to observe and manage complexities and dynamics between various dimensions of technological change standards that have been identified through the above review of the literature."

2.2 Empirical Literature Review

This section reviews empirical studies conducted in various aspects concerning variables under consideration by this study. A review of studies is conducted with identifiable research gaps expected to be filled by this study. The section also provided a synthesis of reviewed empirical studies.

2.2.1 Effect of the environment in implementing technological change

An organizational environment is composed of forces or institutions surrounding an organization that affect performance, operations, and resources. Learn more about the definition, importance, and process of organizational environments in this lesson. A study by Islam et al. (2015) on Organizational culture, structure, technology infrastructure and knowledge sharing with an empirical evidence from MNCs based in Malaysia. The study was based on quantitative research, administered on 90 managerial staff in multinational corporations (MNCs) based in Malaysia. The study found out that learning and development, top management support and centralization were emphatically identified with information sharing, utilizing innovation foundation as an intermediary.

Shchedrin et al. (2018) examined Meliorative institutional environment as an area of state interests. The study revealed that the utilization of miniature hydropower stations on the derivational water system frameworks of the lower region territories of the South of Russia was legitimized and mechanical responses for the utilization of miniature hydropower plants at water admissions, base water outlets, end releases, sprinkling machines are proposed. Bran et al. (2016) reviewed the impact of the stakeholder management model on a variety of variables related to stakeholder satisfaction, the organizational culture of three schools, one in which the stakeholder management model was assimilated, a school that experimented with the model for three years. The examination held close to the school's commitment to propel the individual understudy, which is the result of the instructive framework, one of the most encouraging roads was to ensure the improvement of the school's efficiency. Also, it found out that as an instructive association is to make it a learning association, with worked in formal request and learning components that will empower its individuals to make new information and acclimatize it in the day by day schedule of the instructive deed.

Aidoo (2020) investigated the Impact of the Institutional Environment on the Use of Licensed Technology. The independent variables considered as the factors of institutional environment are financial institutions, regulatory institutions, infrastructure, and security, while the dependent variable is the use of licensed technology from abroad. Data from the manufacturing and the service sectors of the economies of Africa and the Middle East were collected from the database of the World Bank Enterprise Survey. The survey employs random sampling to select firms in each country. The firms were stratified based on the number of employees and the geographical region. Questionnaires are administered to firms from 2006 to 2018 through cross-sectional data collection method. By focusing on the scope of research on the two regions and SMEs, the sampled observations are scaled down from 136,887 to 33,977 firms in 53 countries. Although not all the Pearson correlation coefficients of the independent variables with the dependent variable were high, there were satisfactory levels of significance with p-values below 5%. The independent variables in the regression model had a statistically significant impact on the use of licensed technology from abroad.

Qureshi et al. (2017) note in their study on the role of stakeholders in change management that change is associated with the trend that indicates the rivalry level in the marketplace to manage the organization status were transformation in an organization managed by the leading role of change managers. The study presented a framework Web of Stakeholder use to identify stakeholders and their rule in change management. Also, the usefulness of a framework was determined by the case analysis of an organization which revealed that in the web of stakeholder, it identified the relationship between the process and the members that lie in the web.

Wanza and Nkuraru (2016) examined the effects of change management on the performance of employees concerning technological changes, organizational leadership, structure and culture. The study adopted a case study research design where a target population of 403 employees and a sample size of 121 employees was selected using a simple random sampling technique. The study revealed structural changes and organizational leadership influenced university employees' performance positively (Wanza & Nkuraru, 2016) The study further revealed that technological changes have a great impact on employees' performance due to the rapid technological changes that the world is rapidly adjusting that eases employee's workload and to increase efficiency and

effectiveness at workplace. A strong organizational culture creates synergy and momentum that encourages teamwork and enhances employee performance (Wanza & Nkuraru, 2016).

According to Kimosop et al. (2016) in examining the moderating effect of demographic characteristics on the relationship between strategic capabilities and firm performance in women-owned entrepreneurial ventures in Nairobi, Kenya. The study sought to understand the determinants of performance in women-owned enterprises. It found out that strategic capabilities had a significant effect on the overall performance (Kimosop et al., 2016a). Also, IT capabilities and technological capabilities had a positive and significant relationship with performance, however, only age has an adverse and significant moderating effect.

Kario and Ngugi (2017) examined change management strategies and performance of commercial banks in Kenya. A multivariate regression model and ANOVA was applied to determine the relative prominence of each of the four variables concerning the performance of commercial banks. The study revealed that performance had a positive relationship will all the change management strategies.

Tela (2017) examined the challenges that virtual team (VT) managers face when managing in a virtual environment. Telephone interviews were done using semi-structured open-ended questions to solicit real-time experiences of the VT managers while leading virtual teams. These interviews used a conversational technique that requested participants to narrate and describe the experience and management situations they encountered in the process of performing their day to day duties. The Study found out that the VT managers are experiencing challenges in communication, building trust, culture, relating with teams as well as time management (Tela, 2017).

Javanparast et al. (2018) studied change management in an environment of ongoing primary health care (PHC) system reform in the Australian primary health care services. The findings discovered a policy shift away from the principles of comprehensive PHC including health promotion and action on social determinants of health to one-to-one disease management during the study. Also, the study showed that services with a community-controlled model of

governance had more autonomy to use an emergent model of change and to maintain their comprehensive PHC services.

2.2.2 Effect of communication on the implementation of technological change

Organizational communication helps an institution accomplish many tasks relating to specific roles and responsibilities (Ahlstrom et al., 2020). For example in the areas of sales, services, and production; acclimate to changes through individual and organizational creativity and adaptation; complete tasks through the maintenance of policy, procedures, or regulations that support daily and continuous operations; develop relationships where "human messages are directed at people within the organization-their attitudes, morale, satisfaction, and fulfilment (Too, 2018). Another study by Butt et al. (2016) examined project change stakeholder communication. The study shown that an effective communication ensures stakeholder participation in the change management processes through teamwork and empowerment, whereas absence of communication routines lead to a rational and straightforward project culture where task performance and efficiency are preferred over stakeholder involvement. It further revealed that project communication planning requires additional attention on the know-how of stakeholders than the current stakeholder evaluation models instruct.

Ferro-Soto et al. (2018) looked into the effect of stakeholders-oriented behaviour on the performance of the sustainable business. Using Structural Equation Modelling, both models were estimated from primary data collected from large-and medium-sized multi-sector Colombian companies involved in business sustainability practices (Ferro-Soto et al., 2018). The findings revealed that values are experiences of norms, but neither values nor norms are predictors of products. Also, norms and artefacts exert direct effects on stakeholder-oriented organizational behaviour (Ferro-Soto et al., 2018). Sequentially, stakeholder-oriented organizational behaviours are predictors of both market performance and commitment. Nevertheless, stakeholder-oriented organizational behaviours are not direct antecedents of both financial performance and reputation.

Bel et al. (2018) investigated managing change as a communication, managerial style and change in organizations. The study exhibited the interplay between communication, manager attributes

and the probability that an institution successfully implements a significant change. Although change requires both sufficiently strong advocacy and enough communication to help overcome inertia inside the firm, the study posited that frequent communication could be costly, particularly with strong managers and in larger establishments (Bel et al., 2018). It was revealed that firm size, regular communication and result-oriented managers are all certainly associated with change. However, the use of frequent communication in firms that successfully implemented a significant change is toned-down: (i) when managers incline to be strongly focused on results; and (ii) in greater establishments. This suggests that organizations wishing to foster change should consider the interaction between manager attributes and communication protocols (Bel et al., 2018).

Barbalho et al. (2019) assessed the effect of stakeholders' satisfaction and project management performance on transitions in a project management office (PMO). The study examined the functions, tensions, stakeholders' interfaces, performance and how they drove to the major changes faced by the PMO. In the study, the changes in the PMO were mainly based on non-planned events rather than in a change of the management process. The results revealed that political tensions in the organization, rather than project management performance, explained the PMO transitions. Talwar et al. (2020) examined consumers' resistance to digital innovations as a systematic review and framework development. A total of 54 studies were selected for content analysis to isolate thematic foci, identify research gaps, recommend future research avenues and develop a framework (Talwar et al., 2020). The analysis revealed that the extant literature could be grouped under broad research themes, namely resistance to digital innovations, organisational resistance to technological innovations, resistance to technological healthcare innovations and consumer resistance to innovations (offline) (Talwar et al., 2020). The results of this SLR study were anticipated to galvanise future research in this area from the theoretical as well as from a practice-oriented perspective by providing numerous actionable inputs to combat consumer resistance to digital innovations.

According to Li et al. (2020) in a study examining Stakeholders' enthusiasm to pay for the new construction and demolition waste landfill charge scheme in Shenzhen as a contingent valuation approach. Through regression analysis, the study found out that firm size, ownership, position,

environmental concern, perceived subsidy and effectiveness were found to have a significant effect on stakeholders' stakeholders' willingness to pay (WTP) for the disposal of construction and demolition waste (CDW).

Orford et al. (2017) studied the effect of communication skills training on outcomes in critically ill patients with life-limiting illness referred for intensive care management as a before-and-after study. The primary outcome was documentation of patient-centred goals of care discussion (PCD) within 48 hours of referral to the ICU. Secondary outcomes included clinical outcomes and 90-day mortality. The study revealed increased documentation of a PCD from 50% to 69% ($p=0.004$) and 43% to 94% ($p<0.0001$) in patients decreased by day 90 (Orford et al., 2017). A significant decrease in critical care as the choice of resuscitation goal (61% vs 42%, $p=0.02$) was observed. Although there was no decrease in admission to ICU, there was a significant decrease in medical emergency team call prevalence (87% vs 73%, $p=0.009$). The cancer and organ failure groups had a significant decrease in 90-day mortality (75% vs 44%, $p=0.02$; 42% vs 16%, $p=0.01$), and the frailty group had a significant decrease in 90-day readmissions (48% vs 19%, $p=0.003$) (Orford et al., 2017).

Buya et al. (2018) studied the effect of strategic leadership and communication on strategy implementation in the Administration Police Service in Kenya. The study adopted a cross-sectional descriptive design involving a survey of senior officers and 212 junior police officers. The senior police officers including County/Sub-county Commanders and head of Divisions were purposively sampled to respond to key informant interviews while junior officers stratified into divisions were randomly selected to respond to self-administered questionnaires. The study found out that management style, communication, organizational culture and stakeholder involvement influenced the implementation of strategies.

Ouedraogo & Ouakouak (2018) looked into the impacts of personal trust, communication, and affective commitment on change success. The study was based on an empirical study conducted among 307 employees of Canadian organizations and using structural equation modelling techniques. The study found out that communication had a direct impact on change realization,

as well as an indirect impact through affective commitment. Trust only exerts an indirect effect through affective commitment.

2.2.3 Contribution of training on the implementation of technological change

According to (Korb et al., 2016) in investigating the effect of training on teachers' knowledge of effective classroom management strategies in Jos metropolis. It establish that the number of strategies that teachers believe is effective for classroom management was significantly ground-breaking after the training, signifying that the training was effective in improving teachers' knowledge about classroom management. Specifically, the number of proactive strategies that teachers believed were effective for classroom management significantly increased after training, whereas the number of reactive strategies remained unaffected.

Akcil et al. (2017) noted that for a smooth and problem-free transformation to take place in a digitalizing education system, efficient management is needed. Thus, educational managers need to improve their abilities and develop behaviours suitable for taking education systems into the digital age. Social networks empower leaders to become digital citizens by embracing and implementing Open Leadership. Acceptance of technology and self-efficacy in technological leadership are both seen as factors that can have encouraging or undesirable influences on the new leadership styles. Akcil et al. (2017) aimed to investigate the relationship between open leadership, digital citizenship, technology acceptance and self-efficacy in technological leadership. Working with a group of 153 education managers, the research was conducted using a relational screening prototype. Following multiple regression analyses, it was found that technology acceptance and self-efficacy in technological leadership positively influences digital citizenship at medium level and that self-efficacy in technological leadership and digital citizenship positively influences open leadership (Akcil et al., 2017).

Nejati et al. (2017) examined envisioning the invisible in understanding the synergy between green human resource management and green supply chain management in manufacturing firms in Iran in light of the moderating effect of employees' resistance to change. The study used a sample of 161 firms in manufacturing industries in Iran, where data were analysed using partial least squares structural equation modelling (PLS-SEM) (Nejati et al., 2017). Findings revealed

(1) the significant and positive impact of GHRM on GSCM, confirming the general call for integration between HRM and green management; (2) “Green Development and Training”, “Green Employee Empowerment”, and “Green Pay and Reward” have the most positive influence on GSCM, and these practices of GHRM should receive attention from managers; (3) “Resistance to Change” was found to have a moderating effect on the link between GHRM (particularly green recruitment and selection) and GSCM, because it tended to hamper the first step towards building a sustainable corporate culture, which is the recruitment and selection of new employees (Nejati et al., 2017).

Norfazlina et al. (2016) investigated Customer Information System Satisfaction and Task Productivity as the Moderating Effect of Training. The study found out that all three factors (Ease of Use, Content, and Format) had a significant relationship towards task productivity of CIS. The results also indicated training significantly moderated the relationship between ease of use in CIS and task productivity, however; it did not moderate the relationship between user satisfaction (Content and Format) and task productivity.

Another study by Bhatt et al. (2017), studied a prospective audit on the effect of training and educational workshops on the incidence of urethral catheterization injuries. The study held that current forms of educational and training interventions for urethral catheterization did not significantly change morbidity or cost of iatrogenic urethral catheterization injuries despite a decrease in incidence. Improved and intensive training protocols are necessary for urethral catheterization. The study does not disclose the contribution of training towards the technological change in an organization.

Valentine (2017) investigated the effect of training and development on employee performance at Kakamega County General Hospital in Kenya. The study adopted a descriptive research design method to undertake the study. The study held that there existed a substantial relationship between training and development and performance of employees. However, the study limitlessly does not disclose the contribution of training towards technological change. del Socorro Hubbard & Tawfik (2020) examined organizational systems’ effect on training success in the context of why covering the content is not enough. The study adopted a descriptive

research design, where it was revealed that training enhances the performance of the organization when practicums are embraced. The study finds that the majority of the training conducted concentrate on mere theoretical aspects.

Drezner (2019) examined the relationship between technological change and international relations. It was evidenced that: first, the relationship is shared; while technological change has undisputable effects on international relations, the changing environment of world politics also affects the stride of technological change. Second, any technological change is also an exercise in economic redistribution and societal disruption (Drezner, 2019a). It further noted that technology creates new champions and losers, alters actor penchants, and allows the strategic construction of new models and organizations. The nature of the technology itself, and the extent to which the public sector drives the innovation, generates differential effects on international relations (Drezner, 2019a).

Hatfield et al., (2020) undertook a study on the systematic review of the effect of training interventions on the skills of health professionals in promoting health behaviour, with meta-analysis of subsequent effects on patient health behaviours. The study held that health professionals who received frequent capacity building trainings were more efficient and productive in their dispatch of health services as compared to those who had missed such trainings. The study recommended frequent trainings in order to enhance knowledge management within their organizations and aid professional behaviours of health staff.

Janssen et al. (2017) investigated the shelf life of incumbent workers in times of accelerating technological change as an evidence from a reform of a mandatory training regulation. The study used a difference-in-differences approach to analyse how the flexibly stun of IT-aptitudes influenced the professions of officeholder labourers. The outcomes show that even youthful officeholders experienced durable profit misfortunes in type of lower wage development after the IT-talented alumni entered the work market. Itemized examinations of the systems uncovered that IT-talented alumni swarmed officeholder labourers out of their occupation, and propose that occupants did without advancements in favour for IT-talented alumni. Be that as it may,

occupants experienced just little joblessness during a change period after the flexibly stun and generally continued a stable profession in different occupations and areas.

2.2.4 Effect of managerial behaviour on the implementation of technological change

According to a study on dispositional resistance to change and emotional exhaustion: moderating effects at the work-unit level by Turgut et al. (2016), organizational change, although essential for business success, may negatively impact employees' well-being. The study through multilevel analyses, it revealed that dispositional resistance to change is positively related to emotional exhaustion. Besides, an absence of adage authoritative help and a high enlightening group atmosphere fortified these impacts. It presumed that associations ought to offer instructing and preparing projects to adapt to hierarchical change for representatives who are profoundly change resistant. Firova et al. (2019) examined Managerial innovation for small and medium enterprises. The prevailing managerial innovations and projections for their implementation in the activities of the SMEs were proved to increase performance of SMEs including the terms of the changeover of the world economy to the knowledge economy.

Cheng et al. (2020) investigated Institutional environment, technical executive power and agricultural enterprise innovation performance. The study sampled 164 listed agricultural enterprises from 2009 to 2017 and adopted the negative binomial regression to determine the relationship between institutional environment and innovation performance of these initiatives. The results of the studies exhibited that the more perfect the formal system, the better the innovation performance of agricultural initiatives, while the informal system inhibits the innovation performance of initiatives. The technical executives played an encouraging arbitrator role between formal institutions and innovation performance; however, it did not have a significant arbitrator effect between informal institutions and innovation performance.

Another study by Jabbarian & Chegini (2017) on the effect of perceived organizational support on employee resistance to change by Guilan Municipal Staff. It found out that the relationship between perceived organizational support and resistance to change is evident as follows: readiness for change, the relationship between positive psychological capital and the resistance

to change and the relationship between perceived organizational support and mediates resistance to change. There also existed a negative correlation midst readiness for change and resistance to change among government employees in Guilan municipalities.

(Arar & Abramovitz, 2017) examined Teacher-related factors in the assimilation of technological change in schools using a case of an Arab school in Israel. The research used the mixed-methods approach to enhance the data derived from a case study. It employed a questionnaire of 81 items administered among 55 teachers and in-depth interviews with both teachers and senior management team members at one private Arab school in Israel. Results showed some features that depict the teachers who rated the productivity of this new management change highly. Those teachers inclined to have high expectations of the change and to view the change implementation process positively. Teachers with such characteristics tend to be female teachers. The influence of teachers' education was supressed. Their teaching experience influenced only their expectations and views of the process, but not their perceptions of the change products.

Amarantou et al. (2018) posit that Resistance to change is widely recognized as the main reason for failure when it comes to change initiatives. In their study resistance to change as an empirical investigation of its antecedent's, it found out that resistance to change is indirectly influenced by four main factors-employee-management relationships, personality traits, employee participation in the decision-making process and job security. Another study, Camachon and Barbaroux (2019) noted in their book *Technological Change and Individual Competencies: The Influence of Glass-cockpit Aircraft on French Air Force Pilots Training and Skills* that new generation aircraft, equipped with novel capabilities, represented a technological disruption that was likely to affect the nature and diversity of pilots' competencies, and more globally the learning process that leads to their development. Their findings revealed that the pilot training model and techniques, as well as the typology of the skills and the implications of these developments with regard to the issues raised by the use of on-board simulation techniques, was useful in the subsequent phases of the pilot training program.

Thakur & Srivastava (2018) examined resistance to readiness as the role of mediating variables. In using a questionnaire survey to study readiness to change, trust, perceived organizational

support, emotional attachment, and resistance to change as the main variables; the study utilized descriptive statistics and mediation regression analysis to test all hypotheses. It collected data from a survey of 276 middle-level managers. The discoveries reflected how readiness to change decreases the impact of resistance to change during organizational change. Also, it found out how to trust, perceived organizational support, and emotional attachment mediates the relationship between resistance and readiness and shrinks the gap between the two.

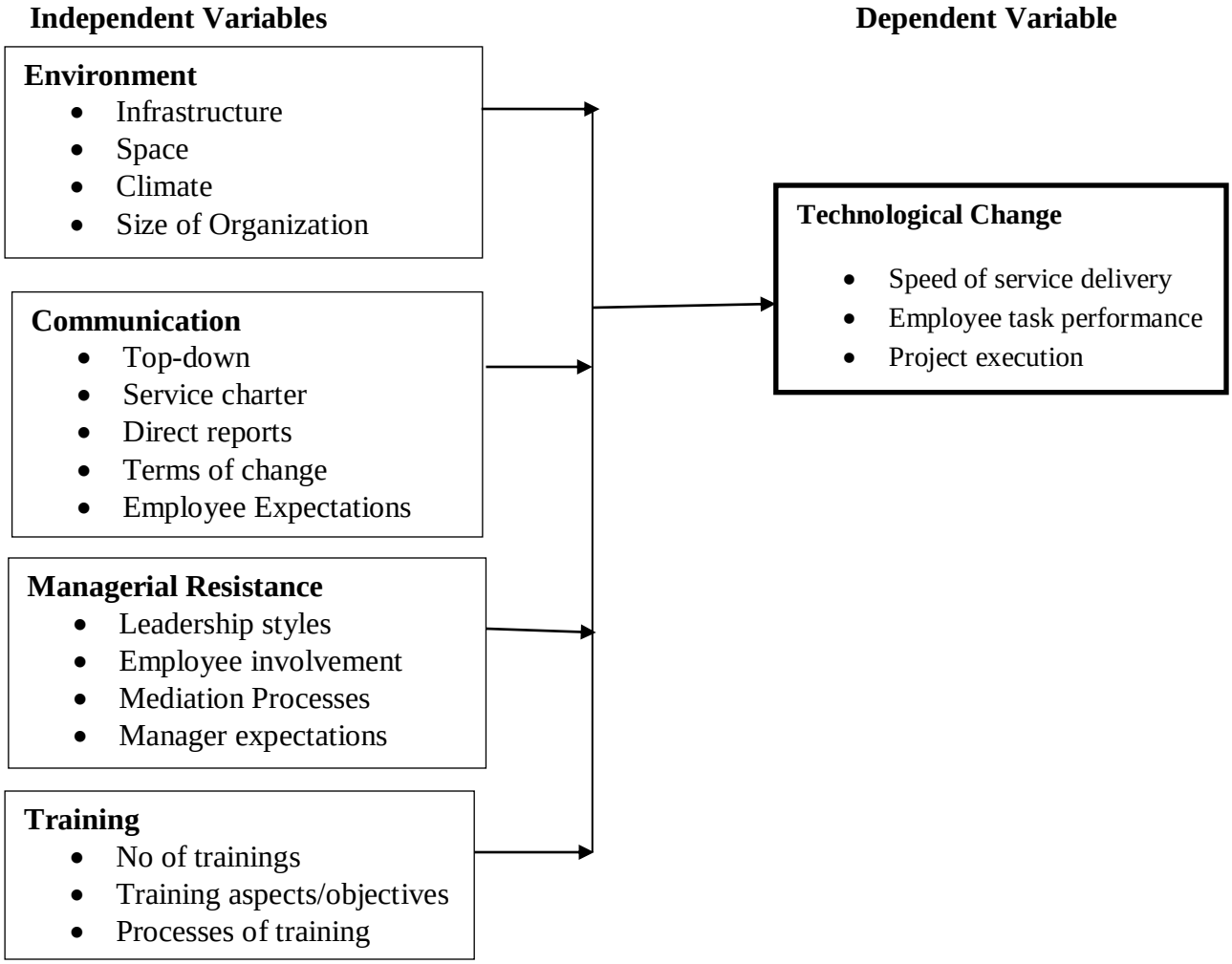
Ferreira et al. (2018) examined the intervening effects of self-versatility in the relationship between authoritative support and fortification from change. The mediation relationship was examined using regression analysis with bootstrapping. The study sampled 323 employees from private and public training institutions. The findings confirmed that the relationship between organizational support and affective and behavioural reactions to imposed change is mediated by ego-resilience.

2.3 Summary of Research Gaps

From the reviewed literature, it can be established that leadership is essentially a process of social influence in which individuals want to feel included, supported and reinforced, especially during change. Relations between individuals and their leader will affect perceived leader effectiveness. As such, an understanding of such relations needs to address issues of the individual's self-concept. Doh & Stumpf (2005) suggested that core aspects of the self are relatively stable across situational constraints, but many peripheral aspects such as organizational changes, communications and culture and leadership practices may be constraining factors that affect consequences for individuals and therefore their perceptions of the leader. However, evidence on the knowledge regarding the impact of diverse technologies on organizational performance remains limited in particular to Kenya.

2.4 Conceptual Framework

This study will examine the role of managers in implementing technological change at the Kenya School of Government. The study will examine the environment, communication, managerial behaviour and training as independent variables against technological change as the dependent variable. Figure 2.1 provides illustrations of the variables.



Source: Researcher (2020)

Figure 2. 1 Conceptual Framework

2.5 Operationalization of Variables

Table 2. 1 Operationalization of Variables

Variables	Type of Variable	Indicators	Measurement scale tool of design
Environment	Independent	• Infrastructure • Space • Climate • Size of Organization	Likert Scale
Communication	Independent	• Top-down • Service charter • Direct reports • Terms of change • Employee Expectations	Likert Scale
Managerial behaviour	Independent	• Leadership styles • Employee involvement • Mediation Processes • Manager expectations • Decision-making processes	Likert Scale
Training	Independent	• No of training • Training aspects/objectives • Knowledge transfer • Type of training	Likert Scale
Implementation of technological change	Dependent	• Speed of service delivery • Employee task performance • Project execution	Likert Scale

Source: Researcher (2020).

2.6 Chapter Summary

The chapter contains a review of the literature from present and past studies. The chapter introduces theories relevant to the study. The chapter also reviews past empirical studies and identifies research gaps. The chapter also illustrates the variables of the study in a figure. Finally, the study provides a tabulation of how variables are operationalized.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes how this research was conducted. The chapter commences with a description of the research design and the choice empirical model adopted for assessing the relationship between the independent and dependent variables and their extent of correlation. The chapter describes the target population of choice, and sampling design adopted, sample size and procedures of obtaining the sample size. It also describes the research instrument adopted for collection of data, procedures of collecting data and adopted technique for analysing collected data and general presentation of research findings.

3.1 Research design

Research design is a well-documented plan with content describing how research is to be undertaken, and time scale allocated inclusive of the expectations of the study. The design method of choice guided the operational guidance of the research study and facilitates ample timing to completing the study. The study used the descriptive research design. According to Cumming (2006), descriptive research is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals.

The descriptive design was used in this study as it enabled the researcher to gather numerical and descriptive data to assess the relationship between the variables. Descriptive research involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Choy, 2014). Therefore, this method was the most suitable to guide this study.

3.2 Target Population

Target population is the amount, number or quantity of units, elements or characteristics aimed to address a subject in a given setting/establishment (Turner et al., 2017). This study targeted 178 employees working at the Kenya School of Government. Table 3.1 tabulates distribution of staff members per the department.

Table 3. 1 Target Population

Department	Target Population	Percentage
Department of Devolution Studies (DDS)	21	11.80%
Department of Public Financial Management	32	17.98%
Department of Advanced Training, Research And Consultancy (CATRC)	23	12.92%
E-Learning Development Institute	28	15.73%
Department of Leadership and Management	56	31.46%
Department of Ethics and Integrity	18	10.11%
Total	**178**	**100.00%**

Source: Kenya School of Government (2020).

3.3 Sample and sampling technique

A well-developed sampling design plays a critical role in ensuring that data is sufficient to draw the conclusions needed (Patten & Newhart, 2017). A sound, socially or scientific based decision must be based on accurate information (Greenfield & Greener, 2012). The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study (Turner et al., 2017). The sampling frame describes the list of all population units from which the sample were selected (Patten & Newhart, 2017). This study adopted simple random sampling technique. It sampled 50% of the staff to participate in the study. Therefore, 89 employees will respond to the questionnaire.

Table 3. 2 Sample Population

Department	Target Population	Sample Size	Percentage
Department of Devolution Studies (DDS)	21	11	11.80%
Department of Public Financial Management	32	16	17.98%
Department of Advanced Training, Research And Consultancy (CATRC)	23	12	12.92%
E-Learning Development Institute	28	14	15.73%
Department of Leadership and Management	56	28	31.46%
Department of Ethics and Integrity	18	9	10.11%
Total	**178**	**89**	**100.00%**

3.4 Instruments

Data collection instruments are tools that aid the researcher in the gathering and collection of relevant data of interest based on the objectives or subject under investigation (Rahi, 2017). This study relied on a questionnaire to collect sufficient data for use in analysing and answering to research questions. The questionnaire covered demographic information, objectives of this study and dependent variable. This was important to obtain data that was used in assessing the relationship of variables.

3.5 Pilot Study

This study conducted a pilot study. The aim was to find out if the proposed research instrument is viable in collecting adequate data, and if the area of study is viable to undertake the study. Data collected during this exercise acts a sufficient pointer about the usability of the research instrument (Jamshed, 2014). During the pre-testing exercise, the questionnaire was amended putting into consideration of the recommendations of the respondents. This was aimed to improve the actuality of the data collection, and the quality of data. Exclusion was undertaken for the departments that participated in the pilot study.

3.5.1 Validity

Validity is the extent of measure to which a designed test intends to measure (Archer, 2019). In this study, content validity was used. A content validity test was used to measure instrument validity. Specific identities or domain units are checked by use of content validity (Wallace & Sheldon, 2015). The supervisor was invited to review the responses from the respondents.

3.5.2 Reliability Test

Reliability refers to the experimental results or tests of an instruments in testing particular data (Wallace & Sheldon, 2015). Reliability can also mean the extent of the realizing results of an instrument (Hordósy, 2011). This was measured by administering the questionnaires to respondents with similar characteristics as the actual sample size. The test was repeated after two weeks (test and re-test method). The scores recorded were utilized to calculate the correlation of reliability. The research instrument will then be piloted to 5 respondents randomly selected from the target population. Based on their comments, changes were made to the questionnaire to

clarify wordings and increase readability. The pre-testing procedure is important to establish content validity (Callegaro et al., 2017).

3.6 Data Collection Procedure

The manner in which data was gathered from the field, stored for use by the researcher is called the data collection procedure (Turner et al., 2017). Various methods apply in collecting data and this study was central on the drop and pick method. After structuring the questionnaire, the researcher had the entire questionnaire dropped at Baringo Campus of Kenya School of Government for filling. The researcher ensured all officers working at the companies receive a questionnaire and account for the number of distributed questionnaires. The researcher collected the questionnaires after 1 week. This enabled respondents to have adequate time in answering to questions contained in the questionnaire.

3.7 Data Analysis and Presentation

Data analysis is the collection, cleaning and compounding of data using applicable techniques or formulas (Greenfield & Greener, 2012). The study ensured proper coding and cleaning of collected data for further analysis. This study utilized descriptive statistics to analyse-collected data. This study used descriptive and inferential statistics in the analysis of data. Once the data is collected it was cross-checked and verified for errors, completeness and consistency. It was coded, entered and analysed descriptively using the Statistical Package for Social Sciences (SPSS 21). Data presentation refers to how the much analysed data, outcomes, or results are provided for viewership (Dikko, 2016). Data presentation methods vary with the type of analysed data. This study will present results in pie charts, graphs and tabulated tables.

The study adopted the following model:

$$\mathbf{Y= \beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+ \beta_4X_4 + \varepsilon}$$

Where;

Y is the implementation of technological change

$\boldsymbol{\beta_0}$ is the regression coefficient/constant /Y intercept

β1, β2, β3 and **β4** are the slopes of the regression equation which represent the standard deviation of the variables

X1 is environment

X2 is communication

X3 is training

$\mathbf{X_4}$ is managerial behaviour, **ε** is the error

3.8 Ethical Considerations

Ethical consideration is one of the most important issues that a researcher should pay attention to avoid immoral conduct that may harm a research. Turner, Cardinal, and Burton, (2017) describe Ethics as pertaining to doing well and avoiding doing harm. Emphasis is placed on a research contributing to more knowledge, protecting the rights of participants by obtaining their consent to participate in the study to allow for voluntary participation free from coercion, avoiding any harm both physical and psychological that may affect a participant and maintain confidentiality as well as anonymity. It is also imperative to use appropriate methods in data collection.

3.8.1 Informed Consent

To acquire consent from the respondents, the study presented Kenya School of Government letter, authorization letter from Management University of Africa, and the questionnaire. This created confidence to respondents to provide relevant data required in the questionnaire.

3.8.2 Voluntary Participation

Adequate questionnaires were presented to the respondents for filling. The respondents were requested to fill the questionnaires as indicated on the letter of introduction but will not be compelled to fill the questionnaires.

3.8.3 Confidentiality

Questionnaires collected from the respondents were treated with lot of confidentiality and the researcher presented a strong character of confidence while distributing and collecting the questionnaires from the respondents.

3.8.4 Privacy

The respondents was assured the questionnaire presented was for academic purposes and are not required to reveal their identity. The researcher ensured all data collected is under a strong locker safe and security lock for the coded data.

3.8.5 Anonymity

Respondents working in sensitive areas were assured of their privacy and researcher ensured all the same is on anonymous basis. This enabled in gathering sufficient data and appropriate data for use in the analysis of this study.

3.9 Chapter Summary

The chapter had outlines the research design applicable for the study. The chapter has also provided the targeted population, the instrument of data collection was used. It has provided the sampling technique and size to be observed in the data collection. In addition, it has provided the collection and analysis of data methods and ethical, reliability and pilot test procedures to be followed.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

This chapter presents the findings of the study. The chapter provides demographic research findings, attributes of the role of managers in the implementation of technological changes, the technological change itself, and limitations of the study, and finally a summary of the research findings.

4.1 Presentation of Research Findings

In this section, the study reveals findings of the demographics, independent and dependent variables of the study.

4.1.1 Demographic Information

This section presents the findings on the gender of the respondents, highest level of education of respondents, and the years of work experience respondents have served at the Kenya School of Government (KSG).

4.1.1.1 Gender of Respondents

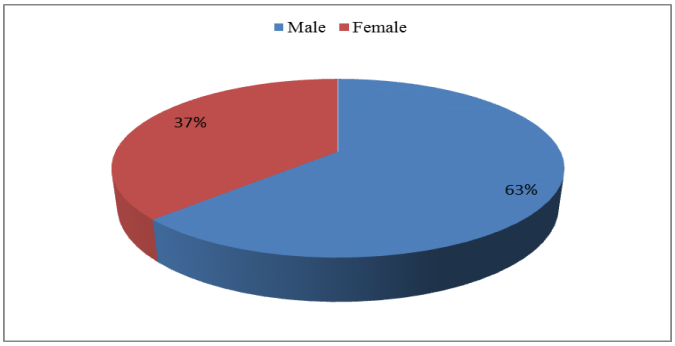


Figure 4. 1 Gender of Respondents

Based on the findings shown on Figure 4.1, it was revealed that KSG staff are male by a high of 63% and female by 37%. It therefore, corresponds to the two-thirds constitutional gender rule.

4.1.1.2 Highest Level of Education

The researcher sought to find out the highest level of education of respondents.

Table 4. 1 Highest Level of Education

Education Level	Frequency	Percentage
PhD	0	0%
Master's Degree	11	12%
Bachelor's Degree	24	27%
Diploma	43	48%
Others (specify)	11	12%
Total	**89**	**100.00%**

Based on reported findings in table 4.1, it was revealed that at a high of 48% of the staff were diploma holders, followed by bachelor degree at 27%, and for both Masters and other qualification at 11% with no one with a PhD degree. Its therefore, can be argued that majority of the staff at KSG are well informed and therefore, suitable in responding to this study.

4.1.1.3 Years of Work Experience at KSG

The researcher sought out to find the years of experiences held by the staff at KSG.

Table 4. 2 Years of Work Experience at KSG

Years of Experience	Frequency	Percentage
Up to 5 years	22	25%
6-10 years	46	52%
11-15 years	19	21%
Over 15 years	2	2%
Total	**89**	**100%**

Based on findings reported in table 4.2, it was evidenced that majority of the staff working at KSG have 6-10 years by 52% and few have over 15 years of experience by 2%. It therefore indicates that the staff at KSG have the right experiences to implement technological changes. These findings are in line with Fogarassy et al.(2017) who studied Critical issues of human resource planning, performance evaluation and long-term development on the central region and

non-central areas as an Hungarian case study for investors. The study held that employees with technological exposures over their period of service had significant improvement in their productivity.

4.1.2 Role of Managers and Implementation of Technological Change

In this section, the study provides the evidence of the extent of agreement to various attributes of environment, communication, managerial behaviour, training in relation to the implementation of technological changes at KSG.

4.1.2.1 Effect of Environment in Implementing Technological Change

Using the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, the researcher sought to assess the extent of agreement agree with effect of environment in implementing technological change indicators at the Kenya School of Government.

Table 4. 3 Effect of Environment in Implementing Technological Change

Environment Indicators	**MEAN**	**SD**
We offer proper institutional positioning for easy of identification	3.55	9.62
We have used a hazard free floor and therefore limiting hazard occurrences	3.11	8.84
We have incorporated hybrid designs in our organization	2.88	9.58
There is adequate infrastructure to aid organizational changes	3.29	4.66
There is adequate space for organizational changes	2.88	12.09
There exist friendly climate to undertake organizational changes	2.97	5.81
The community around the organization supports us during changes	3.12	6.38
We have good lighting systems for proper institutional identification	3.24	3.96
Overall Mean Score	**3.13**	**7.62**

Based on the findings reported in table 4.3, it was agreed that at KSG, there is proper institutional positioning for easy of identification and use of a hazard free floor and therefore limiting hazard occurrences. It was agreed that at KSG has incorporated hybrid designs in our organization, and there is adequate infrastructure to aid organizational changes. Also, it was agreed that there is adequate space for organizational changes, and there exists friendly climate to undertake organizational changes. Finally, it was agreed that the community around the organization supports KSG during changes and there is good lighting systems for proper

institutional identification. In totality, agreement to the extent of the influence of environment in the implementation of technological change yielded a mean score of 3.13. Du (2018) examined a literature review on institutional environment and technological innovation. The findings of the study revealed the internal and external environment in which an organization is situated is instrumental towards the success and performance of the organization. Another study aligned to the findings of this study is Yu et al. (2020)'s findings on linking institutional environment with technological change in the rise of China's flat panel display industry, which revealed that firms employ strategies of the joint venture, and merger and acquisitions (M&As) to build basic operational and innovative capability under a mutually reinforcing local and central institutional environment, and industrial environment of technological substitution. Whereas strategies of the contractual arrangement and talent introduction result in building intermediate innovative capability, according to mutually offsetting local and central institutional environment, and industrial environment of technological upgrading. This is in line with (Javanparast et al., 2018b) who examined Change management in an environment of ongoing primary health care system reform of Australian primary health care services. The outcomes revealed that that service with community-controlled archetypal of governance had more autonomy to use an emergent model of change and to maintain their comprehensive PHC services.

4.1.2.2 Effect of Communication in Implementing Technological Change

Using the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, the researcher sought to assess the extent of agreement respondents agree with the effect of communication in implementing technological change indicators at the Kenya School of Government.

Table 4. 4 Effect of Communication in Implementing Technological Change

Communication Indicators	MEAN	SD
We prepare comprehensible reports	3.89	15.99
We comply with the organizational goals and stick to activity timelines	3.48	10.69
We make comprehensive organizational decisions	2.97	12.99
We have a communication channel for engaging	3.51	10.08
There exists a top-down communication	3.39	6.30

There exists a service charter for every service provided	3.90	16.35
There exists clearly defined terms of change	3.20	3.90
Employee expectations remain high during organizational changes	3.45	15.27
Overall Mean Score	**3.47**	**11.45**

Based on the findings reported in 4.4, at an overall mean score of 3.47, it was agreed that KSG prepares comprehensible reports and complies with the organizational goals and stick to activity timelines. Also, comprehensive organizational decisions are made and that there is a communication channel for engaging. It was also agreed that there exists a top-down communication and a service charter for every service provided. Finally, it was agreed that there exists clearly defined terms of change and employee expectations do remain high during organizational changes. It therefore implies that there is clear communication when implementing technological changes at KSG. Kushwaha et al.(2018) in their study about Impact of enterprise resource planning on human resource management in automobile sector as a Statistical analysis, it held that usage of modern technology in information processing, reporting and assessments aided the productivity of employees and enhanced efficiency of their work. Angela-Eliza and Valentina (2018) examined organizational communication and change management, national challenges and European perspectives. The study held that in order to steer changes to an organization the change needs to be properly managed, and communication is one of the key elements in this process and one of the most important levers to success. According to Chege et al. (2020) in examining the effect of information technology of firm performance, it was revealed that technology innovation influences firm performance positively. Based on the evidence of this study that communication affects the implementation of technological changes; it echoed findings of Ouedraogo and Ouakouak (2018) who investigated impacts of personal trust, communication, and affective commitment on change success. It was also in line with Yue et al. (2019) who investigated Bridging transformational leadership, transparent communication, and employee openness to change as the mediating role of trust.

4.1.2.3 Effect of Training in Implementing Technological Change

Using the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, the researcher sought to assess the extent of agreement with effect of training in implementing technological change indicators at the Kenya School of Government.

Table 4. 5 Effect of Training in Implementing Technological Change

Training	MEAN	SD
Training influence the productivity of employees	3.69	16.66
There is a specific training aspects/objectives	3.65	13.07
We attend regular training	4.25	19.87
Training involve every employee in the organization	3.85	17.56
We attend different types of training	3.87	13.59
There is an increase in the number of training	4.08	17.54
Overall Mean Score	**3.90**	**16.38**

Based on findings reported in table 4.6, at a mean score of 3.90, it was agreed that training influences the productivity of employees, and that there is a specific training aspects/objectives. Also, it was agreed that KSG staff attend regular training, which involve every employee in the organization. Finally, it was agreed that employees attend different types of training, and there is an increase in the number of training. According to Valentine (2017) who investigated effect of training and development on employee performance at Kakamega County General Hospital, found out that training positively impacted employee performance as they were equipped with most recent knowledge and skills needful for performance and productivity. Also, the findings echo Hatfield et al. (2020) results who investigated systematic review of the effect of training interventions on the skills of health professionals in upholding health behaviour, with meta-analysis of subsequent effects on patient health behaviours. Their productivity was found out to enhance understanding and manage patients well.

4.1.2.4 Effect of Managerial behaviour in Implementing Technological Change

Using the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, the researcher sought to assess the extent of agreement with effect of managerial behaviour in implementing technological change indicators at the Kenya School of Government.

Table 4. 6 Effect of Managerial behaviour in Implementing Technological Change

Managerial behaviour	MEAN	SD
There exist a transformational leadership style	3.18	3.90
Employees are involved in the decisions and activities of the organizations	3.06	4.09
There exist a mediation processes in tackling disagreements at the management level	2.89	15.61
There exist low managerial expectations on new changes	2.98	3.27
The decision making processes is seamless	3.22	5.93
Overall Mean Score	**3.07**	**6.56**

Based on reported findings in table 4.5, at a mean score of 3.07 it was agreed that there exist a transformational leadership style and employees are involved in the decisions and activities of the organizations. Also, it was agreed that there exist a mediation processes in tackling disagreements at the management level and low managerial expectations on new changes. Finally, it was evidenced that the decision-making processes is seamless. It therefore implies that managerial behaviour affects the implementation of technological change in a both positive and negative way. Akcil et al.(2017) in their study on examination of open and technology leadership in managerial practices of education system held that transformative leadership was important for a modern organization geared to make hefty competitive advantage in the industry. This is in line with Ruiz-Jiménez and Fuentes-Fuentes (2016)'s findings that management capabilities have a greater influence on both product and process innovation when the management team is more balanced in number of men and women. Also, Nagahi et al. (2019) investigated moderation effect of managerial experience on the level of systems-thinking skills. It was evidenced that managerial experience moderates an individual's systems thinking aptitude toward problem solving.

4.1.3 Technological Change

Using the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, the researcher sought to assess the extent of agreement with technological change indicators at the Kenya School of Government.

Table 4. 7 Technological Change

Technological Change	MEAN	SD
There's an improvement in the speed of service delivery	3.67	12.13
Employee task performance has improved	3.29	19.32
Project activities are executed with speed	2.88	6.83
There's minimal error and data loss in the organization	3.16	8.79
We have reduced cost of doing business	3.46	8.35
Overall Mean Score	**3.29**	**11.08**

Based on reported findings in table 4.7, at a mean score of 3.29, it was agreed that there's an improvement in the speed of service delivery, and employee task performance has improved. Also, it was agreed that project activities are executed with speed, and there's minimal error and data loss in the organization. Finally, it was agreed that KSG have reduced cost of doing business. It therefore implies that technological changes at KSG have a positive impact on the operational way of undertaking business and productivity. Antony Kyalo and Matthew Kimeli, Ayao Evans(2017) studied an assessment of factors influencing service delivery in county governments in Kenya: a study of county government of Kitui. The findings indicated that technology had a significant contribution towards the performance and service delivery of employees at the County Government.

4.1.4 Regression Results

Table 4.8: Table of Coefficients

Coefficients [a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	(Constant)	.067	.148		.452	.652
	Environment	.466	.067	.490	6.590	.041
	Communication	.573	.095	.567	1.829	.020
	Training	.677	.063	.690	7.521	.000

Managerial behaviour	.512	.0.67	.523	6.590	.030

a. Dependent Variable: Implementation of technological change

Table 4.8 revealed that the coefficient of regression in this study indicates that the model had a constant value 0.067. Environment was found to have a coefficient of 0.49 that was statistically significant given a p value of 0.041<0.05, environment was a significant factor in contributing towards Implementation of technological change. Communication had a coefficient of 0.567 which was statistically significant with a p value of a p value of 0.020 >0.05, indicating that this communication significantly contributed towards Implementation of technological change. Training had a coefficient of .690 and a p value of 0.00>0.05 denoting that Training was statistically significant with a p value of .000<0.05, this indicated that Training was significant factor in Implementation of technological change, the study therefore rejects the hypothesis that training has no effect on implementation of technological change at 95% level of confidence. Managerial behaviour yielded a coefficient of 0.523 and a *p* value of 0.030>0.05, which was not statistically significant, therefore the study accept the hypothesis that managerial behaviour affect implementation of technological change. The findings voice the evidence of Helena and Rebello(2020) who studied the importace of learning, training and technological innovation in air traffic control. The study revealed that continuous and prompt learning of new technology, industrial information and innovative approaches through involvement in the processes, was useful in enhancing air traffic control of airports.

Using the unstandardized coefficients, the following equation applies:

$$\mathbf{Y= 0.067+ 0.677X_1+0.577X_2+ 0.512X_3+ 0.466X_4}$$

4.1.3.1 Model Summary

Table 4. 9: Model Summary

Model Summary

Model	R	R Square	Adjusted R	Std. Error of the Estimate
1	.951[a]	.904	.902	.372

a. Predictors: (Constant), Environment, Communication, Training, Managerial behaviour

Adjusted *R* squared is coefficient of determination, which indicates the variation in the dependent variable due to changes in the independent variable. From table 4.9 the value of adjusted R squared was 0.902, an indication that there was variation of 90.2% on dependent variable. This means 90.2% of the variation in the responses pertaining to implementation of technological change. Therefore the unexplained variance is only 9.8%.(Mwangi and Wekesa (2017) investigated the influence of Economic Factors on Organizational Performance of Airlines with a focus on Kenya Airways Ltd. The study evidenced the airline businesses depends on the wellbeing of international trade and the stability of the environment in which they operate.

4.1.3.2 ANOVA Table

Table 4.10: ANOVA Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.498	5	9.125	12.207	.000[b]
	Residual	145.009	84	.747		
	Total	181.508	89			

a. Dependent Variable: Implementation of technological change

b. Predictors: (Constant), Environment, communication, training, managerial behaviour.

Source: Research Data (2020)

From the ANOVA analysis results on table 4.10, ANOVA, the overall p value is equal to 0.000, which is less than 0.05. The regression analysis results in the ANOVA output table indicates that the overall regression model is significant in predicting implementation of technological change at 95% confidence level based on role of managers in the implementation of technological change**.** The findings are in line with Wanza and Nkuraru (2016) who examined the effects of change management on the performance of employees concerning technological changes, organizational leadership, structure and culture, Tela (2017) who examined the challenges that virtual team (VT) managers face when managing in a virtual environment. Also, the findings echo Ferro-Soto et al. (2018) looked into the effect of stakeholders-oriented behaviour on the performance of the sustainable business, and Orford et al. (2017) studied the effect of communication skills training on outcomes in critically ill patients with life-limiting illness referred for intensive care management as a before-and-after study.

4.2 Limitations of the Study

The study was no void of challenges and limitations. Initially, the study encountered slow response owing to unavailability of respondents due to COVID-19 pandemic. This was addressed by the study allocating sufficient time for the respondents and making follow up reminders to respondents about filling the questionnaire, which was the research instrument considered in this study. The respondents returned all the distributed questionnaires. Also, another challenge encountered during the study was the privacy concerns with management, and responses, however, this was solved by the study providing evidence of the letter from the University allowing for the study to be conducted at the Campus.

4.3 Chapter Summary

The chapter commenced with evidence on the demographic information, by the gender, level of education and years of work experience at the Kenya School of Government. The study also revealed the role of managers in the implementation of technological change with a keen look on environment, communication, managerial behaviour and training as the attributes or variables for investigation. The study also provided research evidence on attributes of technological change. The study finally enlisted the various limitations that the study might have encountered in the course of finalizing this research.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.0 Introduction

This chapter provides a summary of the findings; recommendations and conclusions arrived at by the study. In this chapter, the study links various studies in agreement with the findings of the study and those that are conflicting. Also, the researcher provides policy recommendations and suggestion for further research.

5.1 Summary of Findings

This study envisioned at assessing the role of managers in the implementation of technological changes in public training institutions with specific concern of the Kenya School of Government. The study looked reviewed theoretical literature which was relevant to this study. From the theories, it was in line with transformative, environmental nature and communication are important pillars in the excellence of an institution. From the empirical literature, minimal contextual evidence was availed, as record reviews evidenced conceptual findings, and therefore, the need for this study to find the effect of communication, environment, managerial behaviour and training on technological change. Findings reported indicated that majority of the staff are men at 63% and remainder of 37% being female. It was also evidenced that majority of the staff at the Kenya School of Government are both bachelor and diploma holders. This adduced to the evidence that they are well informed and therefore, capable of instituting or providing technical support in the implementation of technological changes. Also, it was evidenced that most of the employees at the institution have an experience level above 6 years of experience. It therefore, implied that KSG staffs have experienced staff in ability to handle technological changes that are introduced.

The study sought to examine objectively the effect of environment, communication, managerial behaviour and training on implementing technological changes by use of variable indicators to assess the extent of agreement. It was agreed at a mean score of 3.13, that there was an influence of environment towards the implementation of technological changes at KSG. Also, at a mean

score of 3.47, it was evidenced that communication affects the implementation of technological changes at the institution. Further, the study realized that at a mean score of 3.07, it was revealed that managerial behaviour has both negative and positive impact in the implementation of technological changes.

The study also sought to find out the effect of training in the implementation of technological changes at KSG. At a mean score of 3.90, it was revealed that regular training to staff had an impact on the technological changes at the institution. Also, a series of technological change attributes put forward for response, it was evidenced that at 3.90, they had an influence on the service delivery, cost of doing business and improved productivity at the institution.

5.2 Recommendations

This study makes a series of recommendations for consideration.

First, there is need to build a collaborative and stakeholder relationship in the environmental setting of the Kenya School of Government. KSG is a public training institution and therefore, community, stakeholder, and other members of the environment in which they have established their Campus; there is the need to establish very strong and sustainable relationships. This will play instrumental role when conducting changes at the institutions.

Secondly, technology is an effective pillar for efficiency and productivity of employees and corporate performance. It is therefore important for the employees to be induced to new technologies that are viable for their productivity, and score highly in providing technical support. Therefore, this study recommends regular update, user training and introduction of a culture in terms of knowledge management towards technological upgrade or utilization.

Thirdly, communication is an important segment of any team or organization. From the study, it was observed that service charter, channel for communication or presenting grievances, employee concerns and other internal communication protocols played a vital role. It is therefore, a recommendation of this study that there needs to be a collaborative, teamwork and viable communication channels that is built on trust, ethos of corporate communication for the purposes of easier implementation of technological changes.

Fourthly, managerial behaviour is a defeatist manner of executive management when positive changes are induced into an institution. The need for transformation leadership style in implementing institutional projects is viable and welcome. It is therefore, the recommendation of this study that to achieve progressive project results, there is the need for minimal managerial behaviour and existence culture of transformational leadership style within public training institutions.

Fifthly, value based training is known to increase productivity, have team staff remain modern to the current knowledge changes and have right skills for work delivery especially with the use of technologies. Therefore, it is the recommendation of this study that training should be regularized with modern knowledges and technologies that have impact on the skills, productivity and overall corporate culture growth.

5.3 Conclusion

From the evidence of research findings, there is an effect of environment in the implementation of technological changes. The study also found out managerial behaviour to influence negatively technological changes. The study found out that training positively affects the technological changes of an institution.This study concludes that there is an effect of environment, communication, managerial behaviour, and training on the implementation of technological changes of institutions. Right managers must have the capabilities to handle work change management, know how to integrate project plans, while ensuring unity in the implementation processes.

5.4 Suggestions for Further Research Study

This study aimed to assess the role of managers in implementing technological change in an organization at the Kenya School of Government. The study suggests research on the role of managers on performance of private sector institutions, relationship of managerial behaviour on retention of customer. Also, the need to investigate on the overall contribution of technology in enhancing product performance or and employee productivity in both public and private institutions such the manufacturing, processing, and service industries.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

Eddah Cheruiyot
Management University of Africa
Nairobi, Kenya.

Dear Respondent,

RE: RESEARCH AID SUPPORT IN FILLING IN QUESTIONNAIRES

The above subject refers.

You have been chosen as one of the respondents in the research titled "***Assessing the Role of Managers in Implementing Technological Change of an Organization: A Case of the Kenya School of Government***" undertaken by me for the award of the degree of Master of Development Studies in Leadership of the Management University of Africa. Your cooperation and support is highly welcome as I look forward to filing the research report.

Sincerely,

Eddah Cheruiyot

APPENDIX II: RESEARCH QUESTIONNAIRE

Dear respondent, you're hereby chosen to respond to the questions listed below. You're required to tick where applicable and your cooperation is highly appreciated.

PART A: DEMOGRAPHIC INFORMATION

Name of the Organization (optional).....

Gender

a) Male [ ]
b) Female [ ]

What is your highest level of Education?

a) PhD [ ]
b) Master's Degree [ ]
c) Bachelor's Degree [ ]
d) Diploma [ ]
e) Others (specify)……..

How many years have you worked for your organization?

a) Upto 5 years ( )
b) 6 – 10 years ( )
c) 11 – 15 years ( )
d) Over 15 years ( )

PART B: ROLE OF MANAGERS AND IMPLEMENTATION OF TECHNOLOGICAL CHANGE

EFFECT OF ENVIRONMENT IN IMPLEMENTING TECHNOLOGICAL CHANGE

Based on the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, to what extent do you agree with the following environment indicators in your organization?

Environment	**1**	**2**	**3**	**4**	**5**
We offer proper institutional positioning for easy of identification					
We have used a hazard free floor and therefore limiting hazard occurrences					

We have incorporated hybrid designs in our organization					
There is adequate infrastructure to aid organizational changes					
There is adequate space for organizational changes					
There exist friendly climate to undertake organizational changes					
The community around the organization supports us during changes					
We have good lighting systems for proper institutional identification					

EFFECT OF COMMUNICATION IN IMPLEMENTING TECHNOLOGICAL CHANGE

Based on the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, to what extent do you agree with the following communication indicators in your organization?

Communication	**1**	**2**	**3**	**4**	**5**
We prepare comprehensible reports					
We comply with the organizational goals and stick to activity timelines					
We make comprehensive organizational decisions					
We have a communication channel for engaging					
There exists a top-down communication					
There exists a service charter for every service provided					
There exists clearly defined terms of change					
Employee Expectations remain high during organizational changes					

EFFECT OF MANAGERIAL BEHAVIOUR IN IMPLEMENTING TECHNOLOGICAL CHANGE

Based on the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, to what extent do you agree with the following managerial behaviour indicators in your organization?

Managerial behaviour	**1**	**2**	**3**	**4**	**5**
There exist a transformational leadership style					
Employees are involved in the decisions and activities of the organizations					
There exist a mediation processes in tackling disagreements at the					

management level					
There exist low managerial expectations on new changes					
The decision making processes is seamless					

EFFECT OF TRAINING IN IMPLEMENTING TECHNOLOGICAL CHANGE

Based on the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, to what extent do you agree with the following training indicators in your organization?

Training	**1**	**2**	**3**	**4**	**5**
Training influence the productivity of employees					
There is a specific training aspects/objectives					
We attend regular training					
Training involve every employee in the organization					
We attend different types of training					
There is an increase in the number of training					

TECHNOLOGICAL CHANGE

Based on the scale of 1= Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree, to what extent do you agree with the following technological change indicators in your organization?

Technological Change	**1**	**2**	**3**	**4**	**5**
There's an improvement in the speed of service delivery					
Employee task performance has improved					
Project activities are executed with speed					
There's minimal error and data loss in the organization					
We have reduced cost of doing business					

APPENDIX III: RESEARCH LETTER FROM THE UNIVERSITY

The Management University of Africa | MUA
Sponsored by the Kenya Institute of Management

Date: 24th August 2020

TO WHOM IT MAY CONCERN

EDDAH CHEPKURUI CHERUIYOT– MML/16/00184/2/19

This letter serves to introduce the above named who is a (**Master of Management and Leadership)** student and is interested in carrying out research on Assessing The Role of Managers in Implementing Technological Change in Public Training Institutions; A Case Study of The Kenya School of Government, Baringo Campus

Any assistance accorded to her in pursuit of this study will be greatly appreciated.

Yours Sincerely,

Juster Nyaga
for Ag, Dean, School of Management and Leadership

THE MANAGEMENT UNIVERSITY OF AFRICA
DEAN'S OFFICE SMAL
24 AUG 2020
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APPENDIX IV: LICENSE FROM NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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Date of Issue: 13/September/2020

RESEARCH LICENSE

This is to Certify that Ms.. Eddah Chepkurui Cheruiyot of The Management University of Africa, has been licensed to conduct research in Baringo on the topic: ASSESSING THE ROLE OF MANAGERS IN IMPLEMENTING TECHNOLOGICAL CHANGE IN PUBLIC TRAINING INSTITUTIONS: CASE STUDY OF THE KENYA SCHOOL OF GOVERNMENT, BARINGO CAMPUS for the period ending : 13/September/2021.

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