

DIGITAL LITERACY AND PERFORMANCE OF COUNTY GOVERNMENT EMPLOYEES OF ELGEYO MARAKWET KENYA

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Abstract: Digitization is the process of converting physical information into digital formats by use of digital technologies to improve business operations. The purpose of the study therefore is to examine the effect of digital literacy on performance of county government of ElgeyoMarakwet. The study was guided by the following specific objectives; to examine the effect of digital culture within the departments at the county, to examine data management on performance of departments within ElgeyoMarakwet County government, to identify the effect of technical capacity on performance of employees at the county, to assess the effect of digital literacy and applications on performance on the operations of the departments in ElgeyoMarakwet County government. The study was guided by the following theories; Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, the Diffusion of Innovation Theory and the Technology-Organization-Environment Theory. The study's research design was descriptive research design. The target population of the study was all heads of departments in ElgeyoMarakwet County. The study shall use census since the target population is small. Data collection instrument at the county of Elgeyo Marakwet was structured questionnaires. Piloting was done within the county of ElgeyoMarakwet departments to test the validity and reliability of the research instruments. Data was analyzed through the statistical package for social science SPSS version 24. Multiple regressions were used to test the significant levels of one variable over the other. Analysis of variance ANOVA will also be used. The study was significant to various stakeholders in the county government of ElgeyoMarakwet.

Keywords: Data management, ICT policies, Technical capacity, Digital Literacy application and organizational performance.

1. INTRODUCTION

Background of the study

Digital literacy is an individual's ability to find, evaluate, and communicate information by use of digital media platforms. It is a combination of both technical and cognitive abilities in using information and communication technologies to create, evaluate, and share information. Digital literacy initially focused on digital skills and stand-alone computers, the coming of the internet and the use of social media has resulted in a shift in some of its focus to mobile devices. Similar to other evolving definitions of literacy that recognize the cultural and historical ways of making meaning, digital literacy does not replace traditional methods of interpreting information, but rather extends the foundational skills of these traditional literacies. Digitization transforms the business and the way of work, changes the boundaries of production, distribution and consumption. These trends are opportunities such as the emergence of new products, processes and techniques, as well as

threats to employers and employees who need to adapt the organization of work, the distribution of work and skills. Now, the overall effects on the labor market are dominated by the global pandemic, which requires telecommuting for employees and managers in digital companies. The impact of digitization on the labor market manifests itself as new requirements for new skills in the implementation of new engagements. The employees have to be trained and re-qualified or replaced by others who already have the needed abilities. Digitization creates both new jobs and makes some of the already existing redundant. Wider use of ICT (information and communication technology) and new digital technologies such as data analysis, artificial intelligence (AI), 3D printing, cloud and mobile technology, the Internet of Things (IoT) and robotics are changing labor markets. But technological innovations are not new to the world. Some examples can be found in the past when, for example, new technologies like steam engines and electricity also shook the world market. Interaction between people in work processes has an important role in the distribution of work. Many people work within business organizations. In the digital transformation, this field of work is changing, with work platforms for mediating between individuals online without people or organizations intermediating outside of this platform. Research has shown that digital transformation will contribute to the polarization of the labor market. This is most likely to be felt in low- and medium-skilled jobs where automated processes can replace labour. In the future, the demand for highly qualified professionals with digital skills, entrepreneurial skills and creative thinking is highly appreciated. Digital transformation changes companies from within, influencing organizational structures and management strategies, as it also influences externally in their interaction with customers, partners, and competitors.

Developing new technologies and increasing dependence on new business models continually reduces transaction costs, redefines business processes in trade, and optimizes business organizational structures. Reducing transaction costs in most cases leads to the entry of new competitors and market dynamics, and new entrants often have other business models. Technological changes can generate additional economic activity, either by creating new products and services, or by improving existing ones and redirecting them to new market segments. New technologies also aim to improve the efficiency and effectiveness of employees in the organization. (Kane et al., 2015). Digital transformation and related business platforms dramatically alter the work organization, lead to significant changes in job retention and labour force specialization. Digital transformation seeks to maximize capital assets by increasing the intensity of labour in the mainstream. This substitute effect, however, is accompanied by a compensatory effect that leads to redistribution of tasks between people and robots/machines/software within the same companies and between sectors. Digital business transformation is a driver of organizational change and allows for more systematic monitoring and control of employees' work in the office or in the home work. Digital transformation provides new opportunities for internal and external cooperation. For example, virtualization technologies, such as cloud computing, allow businesses to centralize data storage while decentralizing access to data, thus allowing employees to access and share digital resources quickly and distantly. Cloud technologies allow smaller companies to reduce their hardware and software costs by implementing cloud computing solutions. IT technologies motivate companies to specialize mainly in industry or product, and other additional activities are outsourced. Especially in the field of services and production, the organization of labor is very flexible in terms of time and space. Data analysis improves the control of production process managers, both qualitatively and quantitatively, by monitoring results, providing electronic transactions and reporting customer satisfaction (World Economic Forum. White Paper, 2016). Information security and data protection are important responsibilities for the business IT team. Therefore, the company's systems undergo annual audits and certifications, disaster recovery processes are implemented to ensure continuous service to businesses, employees and customers. The IT department takes care to provide the latest and best security solutions on the market. Some of these solutions include encryption of information, strictly limited access to networks based on solutions from leading providers and reserved connectivity to the main data centres that provide cloud services. "The growing practice of exported key components, remote access and storage, carries a number of new security risks associated with operating systems, communication protocols and applications" (World Economic Forum. The Future of Workplaces, 2016).

"Innovations in digitization, analytics, artificial intelligence, and automation are creating performance and productivity opportunities for business and the economy, even as they reshape employment and the future of work" (McKinsey, 2017). "Approximately 12% of the global goods trade is conducted via international e-commerce, with much of it driven by platforms such as Alibaba, Amazon, eBay, Flipkart, and Rakuten. Beyond e-commerce, digital platforms for both traditional employment and freelance assignments are beginning to create a more global labor market. Some 50% of the world's traded services are already digitized. These transformations enable firms around the world to compete head-to-head with larger industry incumbents" (McKinsey, 2017). Digital transformation and Artificial Intelligence (AI) will improve productivity

and economic growth of the business organizations, but millions of people worldwide may need lost the work or switch occupations or upgrade skills. Companies implement new modern tools to organize remote work for their employees. The skills of employees to work with specialized IT products remotely are a necessity to keep the job. Management focuses on solving problems in the organization of work, increasing the scope of customer support through tools, including chatbots, automation tools for sustainability reasons, upgrading old and conflicting systems. An important element of digital transformation is technology and also enabling innovation. The new technologies are built using cloud architectures and approaches. Technological advances in the software and hardware industry make product production and service delivery more efficient by: The business processes are defined as a set of logically related tasks performed to achieve a defined business outcome. This definition is similar to: "The logical organization of people, materials, energy, equipment, and procedures into work activities designed to produce a specified end result (work product)". Business processes have two important characteristics (Davenport & Short, 1990):

During the Covid-19 pandemic, the actors in (County governments) had organizational low turnover in their daily operations. This effect gave the County governments a wake-up call to change for their survival rapidly. The customer tendency is currently more digital with limited interactions and reduced activities as they were forced to adopt during the Covid-19 pandemic. The digitization process has provided both challenges and opportunities for County governments to be well-connected to the digital ecosystem (Widiastuti, Kurniasih, & Martini, 2021). In this era of revolution, anything related to digital is a must-do. All life aspects require the use of digital technology in their implementation. The use of digital technology in the other eras was only meant for the big companies, and County governments rarely used digital technology to its optimal. In running any business, understanding digital technology is crucial for all companies. Thus, digital literacy is the ability to understand digital-related technology and to know, use and adapt to daily activities (Widiastuti, Kurniasih, & Martini, 2021). County governments significantly contribute to the economies of many countries globally as they are essential for growth, social stability and job creation. Though County governments increase yearly, they suffer enterprise churn, i.e., fail and go out of business quickly (Douglas, Douglas, Muturi, & Ochieng, 2017). Though the definition of County governments varies from countries, the definition and classification are based on annual turnover and the number of employees. In Sub-Saharan Africa, County governments account for 60% of the enterprises and 41% of economic growth. Since the County governments are managed by few individuals and nature their sizes mean, there have to high cost of having relevant information for the basis of decision-making. The use of digital technology can significantly enhance the decision-making process. Digital information technology has revolutionized business practices (Mabula & Ping, 2018).

Paul Gilster introduced the concept of digital literacy (Gilster, 1997). In his argument, Gilster described digital literacy as the ability to effectively and efficiently use information technology from digital devices for various career, academic, and everyday life activities (Riel, Christian, & Hinson, 2017). There are four main competencies related to digital literacy: internet searching, hyper textual navigation, content evaluation, and knowledge assembly. Internet searching involves the ability to search information on the internet through the use of search engines and also perform other activities related to it. As for hyper textual navigation, this includes the skills for reading and dynamically understanding the hypertext environment. This has the knowledge of Uniform Resource Locator (URL), bandwidth, protocols and even Hypertext Markup Language (HTML). Content evaluation is the ability of an individual to provide a critical assessment of the information found online and the ability to validate and identify the completeness of the hyperlinked information. Finally, knowledge assembly is related to the organization of knowledge building of a collection of information from various sources and evaluating the facts without prejudice (Widiastuti, Kurniasih, & Martini, 2021).

Digital literacy was considered a complex phenomenon in 2017 internationally, and regions and nations have been creating ways to ensure individuals grapple with the digital revolution influenced mainly by local situations (Alexander, Adams, Cummins, & Hall, 2017). According to the New Media Consortium 2016 report, three different digital literacies exist across disciplines: universal, creative, and literacy. Universal literacy focuses on familiarity with essential digital tools, including cloud-based apps, web content and authoring tools, office productivity software and image manipulation. Literacy across disciplines includes the diffusion of digital literacy through different classes such as business, computer-aided human interaction, politics, psychology and others. Technology acceptance theory is a beneficial model that helps explain the behavior of individuals' digital literacy in Kenya. A technology acceptance theory developed from another theory called rational behavior theory. This is a theory for explaining and predicting the actual behavior of an individual. According to

Davis (1989), the use of the system is behavioral, and users are motivated to use the system by factors such as attitude, usefulness, and ease of use. Rogers's theory of innovation diffusion is another theory that can help explain how innovation is accepted by users (Rogers & Singhal, 2003). The theory is essential to communicating new technologies through the dissemination process. Ideas go through the steps from understanding to organizational relation. From these six stages affecting the five categories of individuals, it's about education with innovation. These include Early Adopters, Early Majorities, Late Majorities and Late Comers. They all have different characteristics and attitudes towards the introduction of innovation. (Sakala & Phiri, 2019).

Global Perspective of Digital Literacy

In a study in Indonesia by Erlanitasari, Rahmanto, and Wijaya (2019) on the digitalization of County governments, 36% were still struggling with conventional marketing though only 37% had online marketing capacity with computer and broadband access. About 18% of County governments use websites and social media, while only 9% have sophisticated digital marketing capacity. The study recommended intensive socialization of the Go Online County government's movement for the development of the digital economy in Indonesia. The finding also revealed that the involvement of County governments digitally can potentially increase economic growth by 2%. In Sri Lanka, poor business performance for County governments due to technological literacy, lack of knowledge of education, and lack of access to new knowledge (Amaradiwakara & Gunatilake, 2018).

In Banyumas, Indonesia, digital literacy affected County governments' performance positively. ORGANIZATIONAL actors can help improve their skills through digital marketing training to help them market their products to enhance business performance. The ministry of cooperatives and County governments in Indonesia explained that the industry was experiencing good growth and development and had a strategic role in improving the country's economy. The development of County governments in Indonesia cannot be separated from technological developments. The ORGANIZATIONAL actors are thus required to be adaptive to technological changes. The business actors have taken advantage of technical means such use of smart phones for marketing and communication. The use of social media and other communication applications, such as WhatsApp, has increased. The government of Indonesia has taken the initiative to ensure County governments take advantage of the digital world to develop and sell their business through e-commerce platforms. There are 9.4 million County governments that have gone digital in Indonesia. (Widiastuti, Kurniasih, & Martini, 2021).

Regional Perspective of Digital Literacy

In Africa, digital literacy is more business-oriented, and the frameworks focus primarily on digital entrepreneurship and job skills. There is much emphasis on new professions and skills. According to the Organization for Economic Co-operation and Development (OECD), digitalization offers unique opportunities for County governments in developing countries to participate in the global economy. However, countries like Nigeria are still lagging in digital transition (OECD, 2017). A significant hindrance to the adoption of ICT and the disruptive effects on County governments' growth as well as development is digital illiteracy (Omiunu, 2019).

Kenya's Perspective of Digital Literacy

According to the Central Bank of Kenya (CBK), Mobile banking usage has become the preferred technological innovation by many in Kenya (Central Bank of Kenya, 2020). The paradigm shift in banking is attributed to changing customer needs, technological advancement, economic conditions, innovative financial products, multiple delivery channels, and globalization (Ngunyi, 2018). Further, competitiveness among players in the financial sector like SACCOS, micro-finance and telecommunication companies that offer mobile banking platforms. The telecommunication industry, with a supportive infrastructure and high penetration of mobile phones, is a strategic driver of the mobile bank (Communication Authority of Kenya, 2022). Ndungu and Moturi (2020), in their study on the mobile FinTech uptake determinants in the microfinance sector in Kenya, found that technological factors, environmental characteristics, and organizational factors strongly influenced mobile FinTech uptake. The study established that the availability of technology, perceived technical benefits, availability of resources, organization size, legal and regulatory environment and competition affected the mobile FinTech uptake. However, the study established that with mobile FinTech uptake, the operation cost was reduced, and business operations were efficient (Ndungu & Moturi, 2020).

Statement of the Problem

The Covid-19 pandemic significantly impacted all economic sectors and their ecosystems. Almost all organizational sectors had a decline in sales turnover resulting from the lack of demand for goods and services caused by restrictions on mobility as a way to reduce the spread of COVID-19. The Central Statistics Agency survey in July 2020 revealed that more than 80% of County governments experienced a sales decline (Masbiran, Syafrizal, Aisman, & Diana, 2021). In this era, advances have changed how people produce, distribute, consume and reproduce information. The virtual environment, virtual work, and roles have affected the lifestyle of the modern individual (Alamsyah&Purnama 2019). Problems and constraints of many companies are also due to the difficulty of access to information and productive resources, including capital and technology. They, thus, have limited businesses to thrive. The COVID-19 pandemic led to the financial sector's acceleration of digitisation of financial services to achieve what would have taken decades to complete in weeks, not months. The use of digital channels helped to minimize health risks and also supported the stay-home protocols. Emergency measures were introduced to the financial institutions with the consultation with CBK to encourage mobile banking, and this increased the number of transactions outside bank branches to 94% from 90%. The financial institutions (56%) utilized digital channels as a critical strategy, especially internet banking and mobile banking, while 33% had to make alternative working arrangements and remote access to ensure business continuity.

Borrowing from the financial institutions, it cannot be denied that Kenya has a potential market large enough for a digital business where factors related to the demographic structure reach 50 million inhabitants and the most populated at a young age. Other factors are the penetration of internet users and mobile and smart phone use, which has also reached 60% of the total population (Communication Authority of Kenya, 2022). Reflecting these conditions, it is time businesses (County governments) utilize digital technology as part of the activities of their companies. Very visible from electronic money transaction activity increased significantly (Central Bank of Kenya, 2020). In addition, the research institute Deloitte Access Economics 2015 reveals that when County governments can utilize digital technology will improve their acceptance reaches 80%. Then, for the national economy, when County governments go online, is potentially accounted for a growth of 2% in the year 2025 (Wicaksono, 2018). Through digital, County governments can market the product more efficiently at a more competitive price.

Various studies have been done on local and global digital literacy and County governments' performance; Widiastuti et al. (2021) studied digital literacy and the performance of County governments in Banyumas, Indonesia. Erlanitasari et al (2019) on digital literacy County governments Online in Indonesia movement. Ranatunga et al. (2020) did an empirical study on digital literacy, business uncertainty and the economic performance of businesses in Sri Lanka. Kawira et al. (2019) studied the effect of digital marketing on the performance of County governments in Kenya. Awinja and Fatoki (2021) reviewed the impact of digital financial services on the growth of County governments in Kenya. Though the studies are importantly and relevant to the current research, they provide a contextual gap. The county governments have focused on the development of the general and specialized skills for their human resources. However, the county governments are yet to formulate policies environment and legal frameworks that propel optimal enabled service delivery (Chalotra, 2015) Geared towards enhancing information management. Corruption scandals have also been on the rise due to failure of the counties to embrace a fully-fledged information management system. Further, public participation and shared services in these county governments are still minimal yet hindering the advancement of information management. Thus, this study sought to fill that gap by examining the effect of digital literacy and the organizational performance of County government in ElgeyoMarakwet, Kenya.

Research Objectives

The following objectives guided this study:

General Objectives

The general objective was to examine the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County.

Specific Objectives

The specific objectives of this study were;

- i. To establish the influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County.
- ii. To determine the influence of Digital Culture on organizational performance of County governments in Elgeyo Marakwet County.
- iii. To analyze the influence of Technical Capacity on organizational performance of County governments in ElgeyoMarakwet County.
- iv. To assess the influence of Digital Literacy Applications on organizational performance of County governments in ElgeyoMarakwet County.

Research Questions

- i. What is the effect of Data Management on organizational performance of County governments in ElgeyoMarakwet County?
- ii. What is the effect of Digital Culture on organizational performance of County governments in ElgeyoMarakwet County?
- iii. What is the effect of Technical Capacity on organizational performance of County governments in ElgeyoMarakwet County?
- iv. What is the effect of Digital Literacy Applications on organizational performance of County governments in ElgeyoMarakwet County?

Significance of the Study

The study was significant to the following:

County governments

The study will contribute knowledge to the different County governments regarding utilizing the digital platform and how it can maximize organizational efficiency. It is an opportunity for County governments to embrace technology as the customers are technologically advanced through interactions in other industries.

Information Technology Companies

This research will assist the ICT companies that deal with creating and forming different applications used in the financial sector to develop affordable innovations. One of the reasons the other County governments do not invest in this type of technology is because it's costly, and since technology keeps changing, it's a waste of resources to invest in them every time. Moreover, the companies can come up with innovations that are customer based; hence there is a ready market for their products.

Researchers and Scholars

Academicians and researchers who wish to uptake additional research in this area will significantly contribute to the present study about the influence of digital literacy and the performance of County governments and provide sufficient knowledge that was a source of reference to other researchers. The study will make it easier for individual researchers to identify gaps in current research and conduct research in these areas; the work will also benefit academicians who want to study a similar area.

Policy Makers

Policy makers in government and County governments were educated on the influence of digital literacy. It continues to help identify areas needing reform and make policies conducive to investment in ICT infrastructure in the country. The findings will also compel the national assembly to pass favorable bills that will enhance the use of ICT as part of the financial deepening strategy, which will go hand in hand with the realization of the famous Vision 2030.

Scope of the Study

The study's main objective is to examine digital literacy's contributions to County governments' performance in ElgeyoMarakwet County. The study was limited to Marakwet CBD and will involve County governments. The study was limited to Data Management, Digital Culture, Technical Capacity, and Digital literacy applications as the independent variable relating to digital literacy. The study was anchored on the Technology Acceptance Model, DeLone and McLean's information Success Model and Use of Technology, Diffusion of Innovation Theory and Resource-based view Theory. The target population will heads of departments of the County governments. The study will take place in the 2022/2023 academic year.

2. LITERATURE REVIEW

Introduction:

The chapter presents the Theoretical framework, Conceptual framework, Empirical review, Summary of existing Literature, Critique of existing literature and Research Gaps.

Theoretical Review

The theoretical review comprises theories and models. A theory is a set of interrelated principles and definitions that present a systematic view of phenomena by specifying relationships among variables to explain natural phenomena (Defee, Williams, Randall, & Thomas, 2010). The following theories underpin this study: the Technology Acceptance Model, the Unified Theory of Acceptance and Use of Technology, the Diffusion of Innovation Theory and the Technology-Organization-Environment Theory.

Technology Acceptance Model (TAM)

Davis originally proposed the technology acceptance model (TAM) in 1986. The theory has been one of the most influential models of technology acceptance (Davis, 1989), with two primary factors influencing an individual's intention to use new technology: perceived ease of use and perceived usefulness (Elsevier, 2021). According to Davis, it is the degree to which a person believes that using a particular system will lead to improved performance, also known as Perceived Ease-of-Use, abbreviated as PEoU. PEoU is the degree to which a person believes using a specific system would improve productivity. Acceptance is the first process in technology use and has a bipolar implication. Acceptance, firstly, is a precursor to adoption. Secondly, acceptance dictates the attitude and perception of the users, eventually affecting the efficiency of use and performance (Venkatesh, Morris, Davis, & Davis, 2003). TAM also proposes that external factors affect intention and actual use through mediated effects on perceived usefulness and ease of use. The term usefulness refers to the degree to which one considers that utilizing a system will improve performance. In contrast, ease of use refers to the degree to which a user believes that the benefits of utilizing the system are more compared to the required efforts. Using computers, the internet and other communication technologies in public organizations have enhanced their performance by providing better communication, access to information, knowledge and promoting innovation and efficiency (Dewett, 2001). Acceptance of digital literacy and organizational performance of County governments in ElgeyoMarakwet County was implemented by adopting Digital culture, digital literacy applications, and technical capacity. The technology acceptance model will offer valuable insights into how County governments accept digital literacy in ElgeyoMarakwet County.

DeLone and McLean information Success Model

DeLone and Mclean introduced (1992) the IS success model in a review of the research published from 1981– 1987. They created a taxonomy of IS success based on Shannon and Weaver's (1949) communication theory. Their 1992 paper identified six variables or components of IS success: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. DeLone and McLean's model presents different features differentiated by the two essential concepts: system software quality and information quality. The utilizing of the system has a clear impact on the way individuals accomplish their performance. This impact may eventually affect organizational performance. It was among the first studies to impose some order in IS researchers' choices of success measures (Seddon & Kiew, 1994). DeLone and McLean reviewed 100 papers containing empirical IS success and distilled the massive range of Information system success

measures into six dimensions: information quality, System Quality, user satisfaction, Information Use, Individual Impact and Organizational Impact. Though the model integrates the comprehensive dependent variables used by IS researchers, it received several criticisms (DeLone & McLean, 1992). DeLone and McLean updated the model reflecting the criticisms. As the service concept was added to IT with the Internet, they increased the number of information system success factors to seven, including service quality. They analyzed the interdependence and correlation of these seven factors. The theory will help explain the study variables of Technical capacity, Digital literacy applications, and organizational performance.

Diffusion of Innovation Theory (DOI)

Gabriel Tarde developed Technology Diffusion Theory in the early 19s. Gabriel tabulated the first S-molded diffusion bend, followed by Ryan and Gross in 1943. In 1995 Everett Rogers promoted this theory by arguing that media and interpersonal contacts provide information that influences a person's opinion and judgement (Harker, 2003; Rogers & Singhal, 2003). The theory comprises four elements: invention, diffusion through social networks, time and consequences. Information filters through networks based on the nature of the networks and opinion leaders' role, and innovations are either adopted or rejected (Rogers & Singhal, 2003). It explains how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product (LaMorte, 2019). Diffusion includes three fairly distinct processes: The presentation of the new culture element or elements to the society, acceptance by the society, and the integration of the accepted part or features into the preexisting culture. (Dearing, 2010).

ICT is fast growing, and with time due to continuous usage by society, it is seen to have evolved and improved as time goes by. The technology of diffusion theory helps explain an innovation's adoption process modelling its entire life cycle according to the aspects of communications and human information interactions (Chang, 2011). The diffusion of Digital literacy on organizational performance of County governments in ElgeyoMarakwet County was implemented by adopting digital literacy applications such as mobile wallets, internet applications, and e-marketing applications. The technology of diffusion theory will offer valuable insights into interface design that will support Digital literacy on the organizational performance of County governments in Elgeyo Marakwet County, Kenya.

Technology-Organization-Environment Theory

Tornatzky, L.G and Fleischer developed the theory technology-organisation-environment theory has a broad set of factors that predict the likelihood that information technology was adopted and used (Tornatzky & Fleischer, 1990). As the TOE theory points out, the use and adoption of ICT are influenced by various factors that include technology development, organizational conditions, business and organizational reconfiguration and the industrial environment (Kauffman, 2001). From a technological perspective, adoption is based on various technologies inside and outside the organization and perceived benefits, compatibility, complexity, experimentation and visibility. Regarding the organizational context, multiple aspects of the business are embedded in its consideration. These include business scope, management support, culture, managerial structure, quality of human resources and organization size-related issues such as internal underutilization of resources and specialization. Tornatzky and Fleischer's (1990) TOE theory talks about three things that predict adoption: the leader's features related to change, such as centralization, complexity, formalization, interconnectedness, unevenness, and the organisation's size and external factors, the openness of the system. This theory will help explain Digital literacy in terms of Data management, Digital culture, Technical capacity, and digital literacy applications and how they influence the Organizational performance of County governments in ElgeyoMarakwet county Kenya.

Conceptual Framework

A conceptual framework shows the relationship between the dependent and independent variables in a pictorial representation (Kombo & Tromp, 2016). The study was based on four independent variables: Data Management, Digital Culture, Technical Capacity, and Digital Literacy Applications, and the dependent variable were the organisational Performance of County governments. Figure 2.1 below shows the conceptual framework.

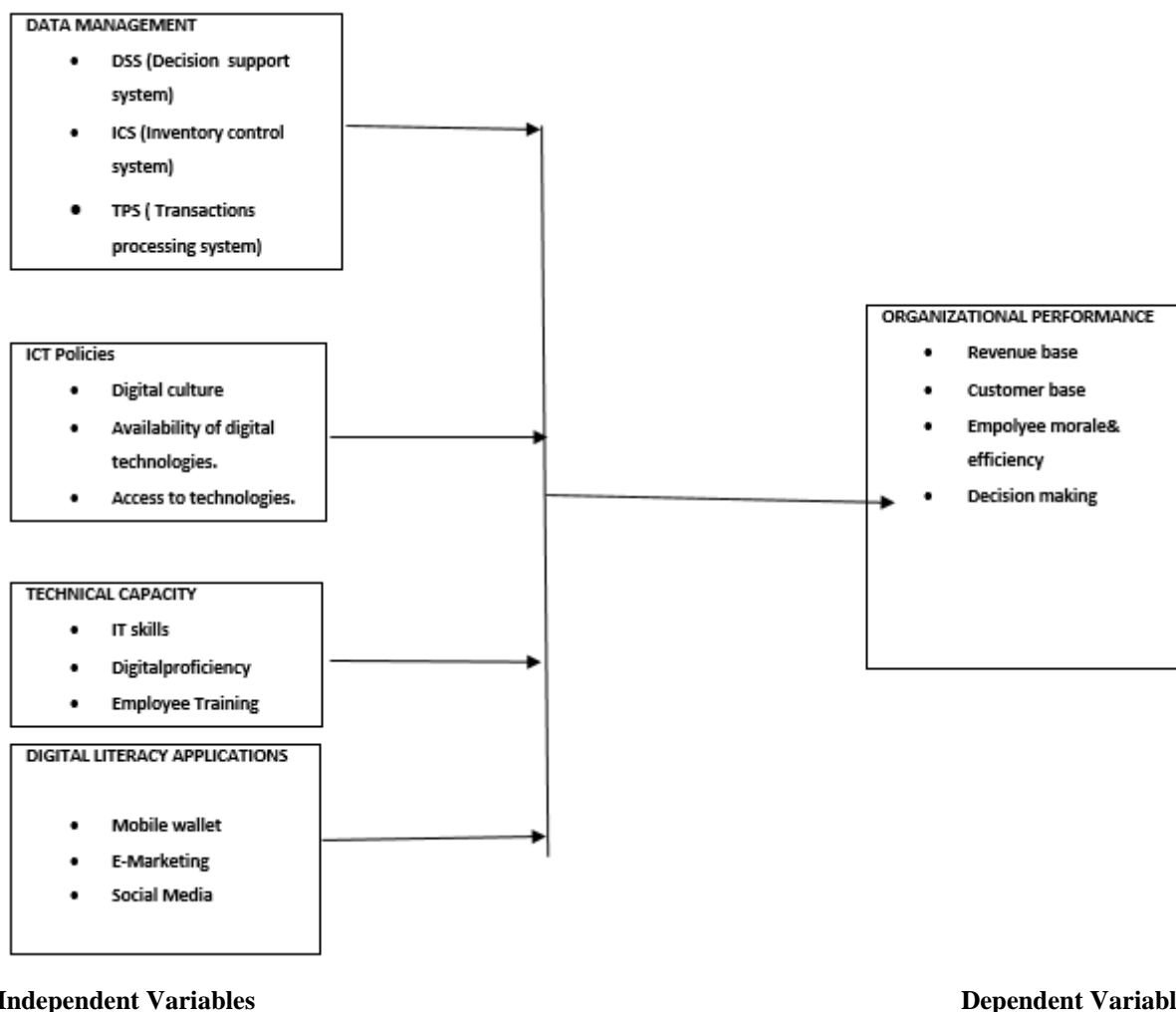


Figure 2.1 Conceptual framework

Empirical Review

Data Management:

There are several types of management information systems. Some of the common include:

Transaction processing system: collects, stores, modifies and retrieves large amounts of business transactional data.

Decision support system: helps with decision-making by providing information and data analysis tools.

Executive information system: provides executives with quick access to key performance indicators and other important data.

Sales and marketing systems: help manage sales and marketing activities.

Inventory control system: helps manage inventory levels.

In Kenya, the new constitution introduced the devolved government regime of the County government and the National Government (Sharma, 2010). This therefore meant that, National Government functions were to be devolved to the County Government. Previously, information management had been largely implemented in the Central Government. It has nevertheless taken root in the 47 Counties spanning the entire country. According to Otike & Kingori, (2009), King'ori and Otike (2010), it has been greatly feared that corruption among other vices such as general misappropriation of public funds is not only bound to be devolved to but are also likely to be multiplied at County levels, and an organization therefore requires a good information management system to deter the would be offenders against such vices.

The growing adoption of information management practices has been driven by the requirements by the government and the information technology (IT) industry to better manage the quality and reliability of information in business and respond to a growing number of contractual regulatory and contractual requirements by the authorities (Bowen, 2010). Managing information brings together the collective judgments of individuals and groups within these organizations responsible for strategic planning, oversight management, and day-to-day operations providing both the necessary and sufficient response measures to adequately address the information management requirements of these organizations (Yusuf & South wood, 2013). Shaykhian and Khairi (2018) studied factors influencing data management model selection. Data Management Models selection (Centralized Data Model or Federated Data Model) for managing organization data is influenced by many factors. This paper explained 21 elements that are useful in selecting an architectural model. Information technology leaders must understand the impact of cost, quality, and availability on the model selections. The study indicates that all factors except for Training, Reliability, Scalability, and Maintainability were found to be significantly contributed to the selection of the Data Management architectural model.

Ndamase and Kyobe (2018) researched the impact of data governance on corporate performance: in the case of a Petroleum Company. A conceptual model derived from the literature review guided this study. Data were collected from 50 employees in organization X whose job descriptions aligned with data management via an intranet web-based survey—quantitative methods for data analysis. The regression analysis results on organisation led four out of six research propositions were made. Compliance with data policies and regulations, data stewardship and ownership was not found to be significant predictors of data governance. However, data modelling, integration and quality are necessary for improved data governance. Bogdan and Borza (2019) researched big data analytics and organizational performance: a meta-analysis study. Big data analytics gained much attention from both the business world and academia. Investments of time, capital and personnel are significant to the level that pioneers of this field reached a point of no return. Although there are clear insights into successful companies built on a big data analytics strategy, the results from the researchers' work show mixed outcomes. Under which circumstances, extensive data analytics adoption leads to positive results is not explicit.

Gray (2006) defines information management practices as mechanisms that help collect, store, and use information. Management Information Systems are distinct from regular information systems in that they are used to analyze other information systems applied in operational activities in the organization (Munirat et al, 2014). Information protectors analyze the current information management state, develop recommendations and present an implementation action plan. According to Beckinsale and Ram (2006), organizations ought to assess the recent situation in terms of technology and architecture, procedure, method and managerial readiness and subsequently use a proper course of action that will help attain the set business objectives. The use of information technology is key, and when processing and handling information, employees must use IT resources provided and approved by the qualified managers for the level of sensitivity of the information concerned (Robles et al., 2008). It's also key to being Vigilant in the process. Files, documents or information whose disclosure or loss would cause serious harm should not be left unattended in any circumstances. Performance is a systematic process for improving organizational performance by developing the performance of individuals and teams. It is a means of getting better results by understanding and managing performance within an agreed framework of planned goals, standard and competency requirements. Performance is much more than appraising individuals. It contributes to the achievement of cultural changes and is integrated with other key human resource activities, especially human capital management, talent management, learning and development and reward management to contribute to the overall performance of the organization. African government have mostly operated in paper-based environment for a long time, the transformation process from manuscript to electronic systems is bound to be complex than is often realized (Larsen, Pedersen & Andersen, 2006). There is the need to fasten the messed papers before contemplating to computerize. When a decision is decided to computerize, it's necessary to maintain some hybrid system, which allows for parallel or complimentary paper and electronic systems to co-exist for a period of time. Information Management practice play a vital role in facilitation of sustainable human development and good governance. According to Article 10 on the Constitution of Kenya (2010), public values and doctrine of governance are important in ensuring that county governments are implementing their various mandates in a bid to propel efficient public service delivery.

ElgeyoMarakwet County governments is all focused on hiring highly skilled labor force that are tech savvy in order to achieve their desired service delivery. Consequently, the county governments have focused on the development of the general and specialized skills for their human resources. However, the county governments have yet to

formulate policies environment and legal frameworks that propel optimal enabled service delivery (Chalotra, 2015). Geared towards enhancing information management. Corruption scandals have also been on the rise due to failure of the counties to embrace a fully-fledged information management system. Further, public participation and shared services in these county governments are still minimal yet hindering the advancement of information management.

Digital Culture

Business is increasingly digital. The move online is often called “digital transformation,” which is a simpler way to say embedding digital technology into business processes and customer experiences. Digital transformation covers everything from automation to artificial intelligence and cyber security (Slack 2022). A digital culture is a concept that describes how technology and the internet are shaping the way that we interact as humans. It’s the way that we behave, think and communicate within society. A digital culture is the product of the endless persuasive technology around us and the result of disruptive technological innovation. It’s applicable to multiple topics but it comes down to one overarching theme; the relationship between humans and technology (Jack Bray 2022). Digital culture is a workplace shaped and influenced by digital tools and technologies. In companies with advanced digital cultures, most employees use digital tech to collaborate, innovate and offer customers access to products, services and support. Digital cultures allow you to grow, innovate quickly and adapt to customer needs. As the global marketplace heads toward digitalization, mature digital cultures help you stay agile and future-proof your business (Slack 2022).

For some organizations it’s all about technology, for others it’s about the new ways of engaging with customers or it could be an entirely new way of doing business. To this end, it’s important that business leaders have a clear understanding of what digital means to them and their business. This brings us back to the overarching theme of digital culture and how it is shaped by the emergence of digital technologies and the technical processes therein. Most companies today have undergone some form of digital transformation, whether that is digitizing their data or using technology to improve processes. This requires a digital culture to be embedded in the foundations of the company. The absence of this can add friction to strategies that require adaptability and cooperation, but if you have a strong digital culture, it can help companies accelerate change and find themselves ahead of their competitors (Jack Bray 2022). Digital culture can be termed as the mother of any organization’s digital transformation. Forcing your company to use new and improved digital tools for performance management on employees is counterproductive. The first step to succeed in your company is to educate your team on digitalization (Coachihub 2021). The importance of culture to the success of IS was well observed by Hofstede et al. (2010), According to Hofstede et al. (2010), ignoring the difference in thinking among users and partners is one of the reasons why IS fails to be implemented successfully. Moreover, Leidner and Kayworth (2010) posited that culture is an important variable to be used in clarifying how groups in society interact with information technology. Leidner and Kayworth (2010) themed cultural studies in IS into (1) Culture and IS development; (2) Culture, IT Adoption and Diffusion; (3) Culture, IT Use and Outcomes; (4) Culture, IT Management, and Strategy; (5) IT Influence on Culture; and (6) IT Culture, or the value attributed to IT by group.

A study by Erlanitasari et al. (2019) to analyze digital literacy in the ‘Go Online County governments Movement program’ in Indonesia launched by the government in 2017 found that only 5% of the County governments could transact online in a study of digital literacy, digital culture and digitalization in Europe by Krelins and Dreijers (2020). The contrastive analysis of Romania and Norway found that the two countries are extremes in daily internet users that have established critical points in cultural transformation. The policies must be reviewed to help evaluate the cultural change in Europe. Norway has a high significant number of internet users as compared to Romania. And this is because Norway has a high income per capita and is top of the Human Development Index (HDI) (Human Development Index, 2020). Digital technologies have helped Norway to progress in art and music. Norway has recognized the importance of digital literacy in society by introducing digital literacy in education and the adult education system. Digital competence has been presented at all education levels through policies and the unique skills programme for adults to help them acquire qualifications for basic skills to meet the changes in demand in modern society (Belshaw, 2020). A study by Awinja and Fatoki (2021) on the effect of digital financial services on the growth of County governments in Kenya found mobile phones are the means for making financial transactions. Digital payment technology increased, and consumers have become more familiar with the different payment systems. The study also established that mobile digital device applications are expected to increase.

Technical Capacity

Technical capacity is particular technical capabilities such as knowledge and skills (techniques) required for an individual and organization to elaborate on their tasks (Owour 2022). Technical capacity means specific ability of entity (person or organization) or resource measured in quantity and level of quality, over an extended period. Hence, technical capacity of an organization means optimum power of its resources to yield output having monetary value (SimranBeit 2015). Technical capacity is essential at each and every level of the organization and suppose if we are considering the technical capacity of an agriculture- based consulting organizational then it starts with the presence of experts on agriculture, and also having relevant subject related or project related experienced & capable staffs (Owour 2022). It will also consider skill and capabilities of staffs & managers to assess their area of intervention, work and manage the selected area effectively & efficiently (SimranBeit 2015).

Technical capacity includes capabilities to choose the specific technology and also see it through the fruition. While doing so, it also includes improving the knowledge, skills and attitudes of staffs, managers so as to achieve the desired goals of the organization (Owour 2022). Therefore, there are two key parameters of the technical capacity viz. Technical choices of the organization and Skill acquisition of the staffs (SimranBeit 2015). A study by Ranatunga et al. (2020) on digital literacy, business uncertainty and the economic performance of small businesses in Sri Lanka found that technological human resource skills positively impacted the financial performance of County governments in Sri Lanka. However, the study didn't find it to have a significant effect. Mallinguh et al. (2020) examined technology acquisition and County government's performance in Kenya. 101 County governments were sampled with their sale performance between 2017-2019. Technology acquisition positively influenced sales (Mallinguh, Wasike, & Zoltan, 2020).

Digital Literacy Applications

County governments are increasingly becoming aware of adapting to networking challenges through their activities, strategies, and routines (Loureiro, Ferreira & Simões, 2021). Organizations begun to optimize and improve their processes' efficiency through digital tools to ensure county government continuity. Thus, digital capabilities are gaining popularity due to a changing and turbulent environment (Zhen, Yousaf, Radulescu & Yasir, 2021). However, our literature review indicates no consensus on the relationship between digital capabilities and organisational performance (Martínez-Caro, Cegarra-Navarro and Alfonso-Ruiz, 2020). Some studies argue that digital capabilities positively affect an organisation through reduced costs and increased flexibility (Drnevich & Croson, 2013). The more an organisation is equipped with these resources and the more effectively it can use them, the more likely it is to develop a more complex and advantageous strategy (Wang, 2007). However, there is evidence that digital capabilities have little or no effect on organisational performance Usai et al. (2021) argue that an organisation's innovative performance is not the result of digital capabilities but creativity and constant efforts in research and development activities. It appears that recent research is "hard-pressed" to present evidence for a positive relationship between digitization and organisational performance (Tan, Pan & Hackney, 2010). This shows that digital capabilities alone are insufficient for achieving a successful innovative performance.

A study by Ranatunga et al. (2020) on digital literacy, business uncertainty and economic performance of small businesses in Sri Lanka found that Digital literacy applications had a significant positive impact on County governments in Sri Lanka. In a study by Masbiran et al. (2021) in West Sumatra in Indonesia, the digital fiancé rose with Real Time Gross Settlement (RTGS) increasing by 21.83% in 2019. Server-based electronic money in West Sumatra also rose from 3,458 accounts to 3,771 thus increasing organizational electronic money transfers. Further, they found that 45.5% used the internet to promote business results, 34.5% for business development, 19.5% for raw material purchases, and 2% for online loans. A few use the internet for marketing, communication, or to increase business opportunities. Web use for business management was minimal, while computer applications were 7%. However, social media was dominant, especially during the Covid-19 pandemic, where both young and old primarily used it in business. However, the average internet adoption in business was quite good (Masbiran, Syafrizal, Aisman, & Diana, 2021).

Kawira et al. (2019) studied the effect of digital marketing on the performance of County governments in Kenya. The study targeted 8,526 licenced County governments in TharakaNithicounty. The study revealed that digital marketing accounted for 38.8% of the performance of County governments in TharakaNithi County. The majority of the owners of County governments utilized digital marketing, and it is perceived that their organisational growth. The study recommends owners

of County governments embrace digital marketing as a strategy to improve performance (Kawira, Mukulu, & Odhiambo, 2019). Awinja and Fatoki (2021) studied the effect of digital financial services on the growth of County governments in Kenya. The study determined the impact of digital content, digital values and skills, digital financial services and their effect on the growth of County governments. The study targeted 1000 registered County governments, and a sample of 300 was drawn. The study found that digital financial services significantly influence the development of County governments in Kenya. The study found mobile phones are the means for making financial transactions. Digital payment technology increased, and consumers have become more familiar with the different payment systems (Awinja & Fatoki, 2021).

“Park et al. (2020) examined the impact of technological capability on financial performance in the semiconductor industry. The study examined the effects of technological assets, intensity, efficiency, and diversity on financial performance. The study found that technological asset group, the financial performance in the high group is affected more by technological intensity, and the financial performance in the low group is affected more by technological diversity. For technological efficiency, only the financial performance in the high group is affected by technological intensity. Although both groups’ financial performance is somewhat affected by technological diversity, there were no statistically significant differences between the groups (Park, Chung, Kim, Kim, & Lee, 2021).Oliveira & Martins (2010) found that the capability and capacity of companies to adopt new technology is linked to their technical infrastructure in research on the impact of ICT infrastructure on cloud computing adoption among manufacturing enterprises in Finland. Wang et al. (2010) researched IT adoption in the banking sector. The investigation revealed that a company's current trusted preparedness, which includes its technological infrastructure, is determined by its adoption of recent IT advances. With the proper hardware, software, or IT infrastructure, cloud computing succeeded (Wang, Wang, & Yang, 2010).

Critique of existing Literature

Widiastuti et al. (2021) studied digital literacy and the performance of County governments in Banyumas, Indonesia. The study aimed to examine the role of digital literacy of the organizational actors in improving the performance of the County governments in Banyumas. The study sampled 100 respondents from County governments in Banyumas. The study found that digital literacy positively affected County governments' performance. The study recommended that organizational actors improve their skills through the optimal use of digital media for product marketing by ensuring they undergo training in digital marketing to enhance their business performance. Though the study has similar characteristics to the current research, it offers a gap as it was done in Banyumas, Indonesia, not Kenya.

In another study by Erlanitasari et al. (2019) on digital literacy, County governments go Online in the Indonesia movement. The study aimed to analyse the ‘Go Online County governments Movement program’ that the government launched in 2017. The study used an online search portal through Google for primary data, while secondary data was obtained from the government publication on the ‘Go Online County governments Movement program’. The study found that 36% of County governments were offline, 37% had basic online capabilities while 18% had medium online capabilities, and 9 % had advanced e-commerce capabilities. Though the study was relevant to the current research, it provided a contextual gap as it was done in Indonesia and was specific ‘Go Online County governments Movement program’. In contrast, the resent study focuses on digital literacy in County governments in Marakwet county Kenya.

Ranatunga et al (2020) did an empirical study on digital literacy, business uncertainty and the economic performance of the small business in Sri Lanka. Data was collected from 110 small enterprise owners through interviews. Partial Least Squares Structural Equation Modelling was used to analyze the data. The study established that digital literacy highly negatively affected business uncertainty and increased County governments' economic performance in Sri Lanka. Business uncertainty had a strong significant mediating effect on the relationship between digital literacy and the economic performance of County governments in Sri Lanka. Though the study was about digital literacy and County governments' performance, it was specific to Sri Lanka (Ranatunga, Priyanath, & Megama, 2020).

Research Gaps

Various studies have been carried out on the Digital literacy and performance of County governments locally, regionally and globally. The different kinds of research were based on multiple areas in World. Ranatunga et al. (2020) did an empirical study on digital literacy, business uncertainty and the economic performance of small business in Sri Lanka. Partial Least Squares Structural Equation Modelling was used to analyze the data. The study was about digital literacy and organizational performance, but it was specific to Sri Lanka. In another study by Erlanitasari et al. (2019) on digital literacy,

County governments go Online in the Indonesia movement. The study analysed the 'Go Online County governments Movement program' while the current study focuses on digital literacy in County governments in ElgeyoMarakwet, Kenya.

Locally, Kawira et al. (2019) studied the effect of digital marketing on the performance of County governments in Kenya. Though the study is relevant to the current study, it focused on County governments in TharakaNithi County and was also specific to digital marketing. The present study focuses on County governments in ElgeyoMarakwet County and looks at digital literacy in general.

Summary of literature review

The study is focused on how digital literacy impacts performance of employees in terms of customer morale, customer base and financial turnover in ElgeyoMarakwet Count, Kenya. Chapter two has looked at the theoretical framework of the study and the empirical literature covering the four independent variables: Data Management, Digital Culture, Technical capacity, and digital literacy applications. These factors are used to determine the performance of the employees at the county of ElgeyoMarakwet departments. The counties that have not embraced digital technology lags behind in terms of performance. It also covered the conceptual framework, critique of the existing literature review and research gaps.

3. RESEARCH METHODOLOGY

Introduction

This chapter describes the research design and target population, sampling procedure, instruments to be used in data collection, pilot test, reliability and validity of the research instrument, data collection procedures and analysis.

Research Design

The study employed an explanatory research design. An explanatory research explains why certain phenomena work in the way that they do. Explanatory research is often quantitative research. However, a study with a large sample conducted in an explanatory manner can be qualitative as well. Explanatory research often involves collecting numerical data that can be analyzed statistically to prove or disapprove certain phenomenon.

Target Population

A population is a group of individuals, objects or items from which samples are taken for measurement or an entire group of persons or elements with at least one thing in common (Kombo & Tromp, 2016). This study targeted the population of 220 employees working in Education and Technical Training department, Public service, devolution and ICT department, Culture sports and gender department, Finance and economic planning department, co-operatives and industrialization department, Agriculture, Fisheries and Livestock department, Water and Environment department, Public works and Transport department, Environment and Natural Resources departments, County public service board departments, Health and sanitation department, Environment and climate Change department. These departments were considered to have appropriate information needed for this study.

Sample size and Sampling Technique

A sample size of a social study needs to be representative to reduce the sampling errors which affect the accuracy of the study results (Orodho, 2009). The sample size was calculated using Taro Yamane's formula of sample size with an error of 5% and confidence

coefficient of 95% (Yamane 1967)

$$n = \frac{N}{1 + Ne^2}$$

Where n= the sample size

N = the size of population

e = the error of 5 percentage points

$$n = \frac{220}{1 + 220(0.05^2)}$$

=142.

Table 3.1 Sample frame

DEPARTMENT	EMPLOYEES	SAMPLE SIZE
Education and Technical Training.	30	20
Public service, devolution and ICT.	25	20
Culture sports and gender	15	10
Finance and economic planning	30	10
co-operatives and industrialization	10	10
Agriculture, Fisheries and Livestock	8	10
Water and Environment	12	5
County public service board	20	15
Health and sanitation	20	20
Public works and Transport	10	10
Environment and Natural Resources	20	10
TOTAL	220	142

Source: County Government of ElgeyoMarakwet (2023).

Research Instrument

The questionnaires were used as the primary data collection instrument. A questionnaire is a research instrument that captures data from a large sample (Kombo & Tromp, 2016). A questionnaire is a set of question items used to collect data from respondents; especially in cases where the respondents are spread out to a larger area and can read and write. A questionnaire is good because it allows respondents to keenly review the question items and respond to them as required (Cherry, 2015). A questionnaire is a popular data collection tool in most research studies since it is easier to administer and cheaper when collecting data from many people (Cherry, 2015). Besides, questionnaires reduce the chances of bias since it is in paper form, and confidentiality can be upheld (Creswell & Clark, 2017). A drop-and-pick method was used to administer the research questions, where the questionnaires was issued and collected after three days to give the respondents' time to fill in.

Data Collection Procedures

The researcher was first to obtain an introduction letter from the university, which was used to introduce him to the sampled respondents. A research permit was also being obtained from National Council for Science and Technology (NACOST) before commencing the research. The questionnaire was administered by the researcher with confidentiality as the name of the respondent will not be written anywhere. The questionnaire used a 5-point rating column to solicit information from the respondent. The respondents were given two hours to indicate their response after which the questionnaires were collected.

Pilot Study

The purpose of pilot testing is to establish the accuracy and appropriateness of the research design and instrumentation (Saunders, Lewis & Thornhill, 2009). Newing (2011) posits that the importance of field piloting cannot be overemphasized; you will almost always find that there are questions that people fail to understand or interpret in different ways, places in the questionnaire where they are not sure where to go next, and questions that turn out simply not to elicit useful information. The research instrument was pretested at TransNzoia County so as not to interfere with the study sample. A pilot group of fourteen (14) respondents was targeted. The findings of the pilot study were used to improve the data collection instruments.

Validity of research instruments

Validity is the accuracy and meaningfulness of inferences, which are based on the research results. In other words, validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda & Mugenda, 2011). The study will ensure validity by using the experts' opinion on the piloted questionnaires. Sekaran and Bougie (2016) aver that validity is the degree to which a statistical instrument measures what its intended to measure and it emphasis the accuracy of those instruments. There are different types of validity that can take place and they are content, construct and criterion validity. Validity is concerned with the truthfulness or accuracy of the results and refers to the extent to which it measures what it was intended to measure. In the context of internal validity, there are two kinds of validity of face validity and criterion validity. Face validity is the extent to which a logical relationship exists between the variables and the proposed measure in the study. It does not provide enough proof of validity since it is

subjective. This validity was essential in this study because it is a logical measure the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County. Content validity is the extent to which research instruments adequately cover the constructs being studied. This is usually achieved by seeking opinion of other experts.

External validity refers to the extent to which the findings and results of a study could be generalized to other particular research samples and as such the external validity was generated to county government of TransNzoia. To ensure that the examine the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County instrument has content validity, the questionnaires was given to the supervisors and staff experienced in influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County. Construct validity tests how well the results obtained from the use of the measures fit the theories around which the test is designed. This can be attested by use of use of convergent validity, which is established when using scores obtained with two different instruments measuring the same concept that are highly correlated and discriminated.

Reliability of research instruments

Mugenda and Mugenda (2011) documented that reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. To ensure reliability the study used Cronbach's Alpha. A coefficient of 0.7 or above implies that there is a high degree of reliability of the data Mugenda and Mugenda (2011).

Sekaran and Bougie (2016) opines that reliability refers to the extent to which a statistic is without bias and it is consistent measurement across time. The purpose of reliability is to minimize errors and biases in a study. To ensure reliability, a pilot study was carried out to test and improve the flow and clarity of the questionnaires' before the actual data collection. Cooper and Schindler (2014) indicate that a pilot test helps in refining the questions by removing some irrelevant items and adding others to genuinely engage the participants. The research instruments was checked to find out if they yield similar results after pretesting. Kothari and Garg (2014) denotes that internal consistency of a set of measurement items refers to the degree to which the items are homogeneous and can be estimated using a reliability coefficient such as Cronbach's alpha. Cygler and Dębkowska (2015) observes that Cronbach's alpha correlates each item with each other item and the total score. Items with weaker correlations or low scores were removed to leave an instrument with a high degree of homogeneity.

Saunders, Lewis and Thornhill (2016) observed that the reliability co-efficient findings of Cronbach's alpha of 0.9 is excellent, 0.80 is considered good, 0.7 is acceptable, 0.6 is poor and while 0.5 and is unacceptable. Creswell and Clark (2017) admit that based on this an internal consistency analysis was performed for each statement corresponding to each of the identified influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County constructs. To ensure reliability, the items was based on the estimates of variability of participants responding to the items. The research instruments was administered to the same respondents then tested for reliability.

Data Analysis and Presentation.

Data Analysis entails all the processes and procedures employed to make logical deductions from the data sets (Saunders, Thornhill, & Lewis, 2012). The researcher used quantitative techniques in analyzing the data. Data from questionnaires was summarized, edited, coded, tabulated and analyzed. Editing was done to improve the quality of data for coding. Editing involved going through the questionnaires to ensure that respondents have responded to questions appropriately for them to qualify for the study. Analysis of the questionnaire used descriptive statistics of frequencies, means and percentages using Statistical Package for Social Sciences (SPSS) version 26. The use of charts, frequency tables and bar charts presented data. Correlation and regression analysis was also be analyzed. Pearson's Correlation analysis was done to test the nature of the relationship between the dependent and independent variables. A multiple linear regression model was used to test the significance of the effect of the independent variables on the dependent variable. The multiple linear regression models are shown below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Whereby;

Y = Organizational Performance

B₀ = Constant

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients of determination

X_1 = Data Management

X_2 = Digital Culture

X_3 = Technical Capacity

X_4 = Digital Infrastructure

ε = Error term.

4. RESEARCH FINDINGS AND DISCUSSIONS

Introduction

The purpose of the study was to examine the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County. The study was guided by the following specific objectives; to establish the influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County, to determine the influence of Digital Culture on organizational performance of County governments in ElgeyoMarakwet County, to analyze the influence of Technical Capacity on organizational performance of County governments in ElgeyoMarakwet County and to assess the influence of Digital Literacy Applications on organizational performance of County governments in ElgeyoMarakwet County.

Response Rate

In survey research, response rate, also known as completion rate or return rate is the number of people who answered the survey divided by the number of people in the sample. It is usually expressed in the form of a percentage. The targeted population of the study was 140 respondents but only 130 who filled in the questionnaire. This means the response rate was 92 percent. According to Best & Khan (2007) a response rate of 50 percent is considered adequate, 60 percent good and above 70 percent very good. Therefore, in view of this, the response rate was considered very good and exceeded the threshold as postulated by Best and Khan (2007). On the basis of this, the researcher went ahead to analyze data as presented in the following sections.

Results of the Pilot Study

A pilot test is conducted to detect vulnerabilities in design and instrumentation and to provide proxy data for the selection of a probability sample (Kothari & Garg, 2014). A pilot study was conducted to test the reliability and validity of the questionnaire. Pre-testing was done on a sample of 10% of the respondents. The researcher relied on a Likert-type scale and uses the most common internal stability measure known as Cronbach's alpha (α). It indicates the extent to which a set of test items can be regarded as measuring a single latent variable (Cronbach, 1951). The recommended value of 0.7 will be used as a cut-off of reliabilities. All aspects of the questionnaire pre-tested included question content, wording, sequence, form and layout, question difficulty and instructions.

Response Rate

Out of the sample size of 142, 10% of the same was 14 respondents who filled questionnaires and returned thus, a 100% which was good response rate.

Pilot Study Results

The pilot study checked for Validity and reliability of the research instrument. Validity is concerned with establishing whether the content of the questionnaire measures what it is supposed to measure. Validity is ensuring that a test measures what it measures (Kothari & Garg, 2014). Both content and face validity will be checked. Content validity of the research tools will be ensured through expert judgment provided by my supervisor. Kothari and Garg (2014) point out that, content experts help to bring about the validity of the content by defining in precise and detailed terms the domain of the specific material that is considered for testing and then determining that by the test. Construct validity was determined through factor analysis.

Exploratory factor analysis (EFA) using principal component analysis with varimax rotation was used to assess construct validity of study variables. Factor analysis acts as a gauge of the substantive importance of a given variable to the factor and it was used to identify and remove hidden constructs or variable items that do not meet the objectives of the study and which may not be apparent from direct analysis (Leech, Barrett, & Morgan, 2014). A loading value of 0.7 is the rule of thumb and is believed to be satisfactory but due to the seemingly difficulties of meeting the 0.7 criterion a loading of up to 0.4 level is acceptable. The appropriateness of using factor analysis is further substantiated by Bartlett's test of Sphericity and Kaiser-Meyer-Olkin (KMO) measures of sampling adequacy. The value for KMO measures of sampling adequacy should be greater than 0.7, and is inadequate if less than 0.5 (Leech, Barrett, & Morgan, 2014).

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated testing (Kothari & Garg, 2014). The accepted rule of thumb is: $\alpha \geq 0.9$ - Excellent; $0.9 > \alpha \geq 0.8$ - Good; $0.8 > \alpha \geq 0.7$ - Acceptable; $0.7 > \alpha \geq 0.6$ - Questionable; $0.6 > \alpha \geq 0.5$ - Poor and $0.5 > \alpha$ - Unacceptable. Therefore, ideally the Cronbach Alpha coefficient of a scale should be at least acceptable, that is, above 0.7. The recommended value of 0.7 will be used as a cut-off of reliabilities (Russell, 2013).

Based on all the Cronbach's alpha test all variables met the threshold proceed on collecting data to analyse. Table 4.1 below shows all the Cronbach's alpha tests.

Table 4.1: Overall reliability results

	Cronbach's Alpha	Number of items	Remarks
Data management	0.944	6	Accepted
Digital Culture	0.767	6	Accepted
Technical Capacity	0.803	6	Accepted
Digital Literacy Applications	0.751	6	Accepted
Organizational Performance	0.776	5	Accepted

Background

The study sought to find out the profile of the respondents, that is; respondent gender, age, highest level of education, and duration of work of the respondents the findings are presented in the section below.

Gender

The results from table 4.2 below on gender of the respondents revealed that 70.0 percent were male while 30.0 were female. This depicted a slightly low on balance in gender in ElgeyoMarakwet County. Figure 4.2 below shows the results.

Table 4.2: Gender of the Respondents

		Percent	Valid Percent	Cumulative Percent
Valid	Male	70.0	70.0	70.0
	Female	30.0	30.0	100.0
	Total	100.0	100.0	

Respondents Age

The study sought to find out the respondents age and the findings are presented in Table 4.3:

Table 4.3: Age of the Respondents

		Percent	Valid Percent	Cumulative Percent
Valid	21-30	46.0	46.0	46.0
	31-40	38.0	40.0	86.0
	41-50	13.0	13.0	99.0
	over 50	1.0	1.0	100.0
	Total	100.0	100.0	

Result of respondent's age from table 4.3 indicated clearly that 46.0 percent of the respondents were between ages 21-30 years. 40.0 percent of the respondents were between ages 31-40 years, 13.0 percent were between ages 41-50 years while only 1.0 percent of the respondents were over 50 years. The results shows that majority of the respondents in the in ElgeyoMarakwet County were between age 21-30 years.

Respondents level of education

The study sought to find out the respondents level of education and the findings are presented in Table 4.4:

Table 4.4: Respondents level of education

	Percent	Valid Percent	Cumulative Percent
Valid Certificate	16.0	16.0	16.0
Diploma	38.0	38.0	54.0
Degree	34.0	34.0	88.0
Post graduate diploma	10.0	10.0	98.0
Masters	2.0	2.0	100.0
Total	100.0	100.0	

Table 4.4 shows results on level of respondent's education. From the above results shows that 16.0 percent were certificate holders, 38.0 percent of the respondents were diploma holders, 34.0 percent indicated that they had degree level of education while 10 percent of the respondents indicated that they had postgraduate diploma. Only 2.0 percent of the respondents had master's degree level of education. The results revealed that majority of the respondents in ElgeyoMarakwet County had diploma level of education.

Respondents level of duration of work

The study sought to find out the respondents length of work and the findings are presented in Table 4.5:

Table 4.5: Respondents level of duration of work

	Percent	Valid Percent	Cumulative Percent
Valid less than year	28.0	28.0	28.0
1-3 years	48.0	48.0	76.0
4-7 years	15.0	15.0	91.0
8-10 years	4.0	4.0	95.0
more than 10 years	5.0	5.0	100.0
Total	100.0	100.0	

On duration of work as shown on table 4.5 above results indicated that 28.0 percent of the respondents had worked for less than a year. 48 percent had worked for 1-3 years, 15.0 percent of the respondent had work experience of 4-7 years while 4.0 percent and 5.0 percent had a work experience of 8-10 and more than 10 years respectively. The results shows that majority of the respondents had worked for less than a year meaning they were still new in in ElgeyoMarakwet County.

Descriptive Statistics

In this section, the study presents the finding on the objectives of the study. A five-point Likert scale was used where: 1 Strongly Disagree, 2 Disagree, 3 Neutral, 4 Agree and 5 strongly agree. Means and standard deviations were used to interpret the results. In interpretation of the ranges, strongly disagree (1.0-1.8), disagree (1.9-2.6), Neutral (2.7-3.4), Agree (3.5-4.2), and Strongly Agree (4.3-5.0) (Hall, 2010). Standard deviation value greater than 2 means that respondent differed greatly in their opinion while below 2 indicate a slight variation. In this study, Strongly Disagree means a strong contrary opinion, Neutral neither agree nor disagree i.e., no significance statistical evidence was found by the respondents to make a conclusive decision, disagree means contrary opinion, and Agree mean the opinion is true, and finally, Strongly Agree means the opinion is very true. The following are descriptive statistics based on the study objectives.

Influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County.

The first variable was to establish the influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County. Respondents gave their level of agreement on the various statements regarding Data

Management on organizational performance of County governments in ElgeyoMarakwet County as shown in Table 4.6 below. The Average of 3.53 provided significance evidence to indicate Data Management on organizational performance of County governments in ElgeyoMarakwet County. The average standard deviation of 1.287 also indicated that the responses did not vary that much from the mean of 3.53 standard deviation of $1.287 < 2$.

The findings specifically indicated that the organization collects and manages the data for business decisions ($M = 3.45$, $SD = 1.335$); the organization used databases and knowledge bases ($M = 3.47$, $SD = 1.238$). Majority of the respondents agreed that The organization uses management information systems to help it make decisions ($M = 3.79$, $SD = 1.294$); The digital literacy application embraced by the organization ensures import information and data about the customer is captured ($M = 3.82$, $SD = 1.273$); Content services are used to capture data at a central place, e.g. records management, data collection ($M = 3.52$, $SD = 1.326$). However, respondents did not find significant evidence to suggest The organization has invested in data management platforms to ensure data is available and secured and backs up its data ($M = 3.31$, $SD = 1.296$).

Table 4.6: Data Management

Statement	Mean	StdDev
The organization collects and manages the data for business decisions	3.45	1.335
The organization has invested in data management platforms to ensure data is available and secured and backs up its data.	3.31	1.296
The organization used databases and knowledge bases	3.47	1.238
The organization uses management information systems to help it make decisions	3.79	1.294
The digital literacy application embraced by the organization ensures import information and data about the customer is captured	3.82	1.273
Content services are used to capture data at a central place, e.g. records management, data collection.	3.52	1.326
Average data management	3.53	1.287

Multiple Regression Analysis

Regression is a statistical technique that deals with the determination of linkages between one or more independent variables and a dependent variable by fitting a line of best fit through a series of observations (Mooi&Startstedt, 2014). The summary of the study's multiple regression model is presented in Table 4.7. These results show that the R Square value for all the variables was 0.724 indicating that the model explained 72.4% of any changes in the dependent variable, organizational performance of County governments in ElgeyoMarakwet County whenever there is a one percent change in the independent variables. This means that the model managed to reach the 0.7 threshold for significance of the R Square value as recommended by Hamilton, Ghert and Simpson (2015). This demonstrates a fairly strong goodness-of-fit of the regression model.

Table 4.7: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.849 ^a	.724	.722	.32551

a. Predictors: (Constant), Data Management, Digital Culture, Technical Capacity, And Digital Literacy Application

Analysis of Variance

Sawyer (2009) affirmed that the Analysis of Variance (ANOVA) is a statistical procedure that attempts to find out existing differences between experimental group means in situations where there are one or more independent variables and a dependent variable. The results of the ANOVA of the study are presented in Table 4.8. The results indicate that the ANOVA F-test score, calculated value F_{cal} at 5% level of significance is equivalent to 34.811, which is greater than the F critical value (F_{crit}) of 2.45 indicating that there is a significant relationship between all the independent variables and the dependent variable of socio-economic empowerment of households. The p-value of 0.000 is less than 0.05 indicating that there is a statistically significant relationship between each of the independent variables and organizational performance of County governments in ElgeyoMarakwet County in accordance with the recommendations of Kao and Green (2008). This demonstrates the goodness of fit of the model.

Table 4.8: Analysis of Variance(ANOVA)a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51.794	4	2.621	34.811	.000 ^b
Residual	21.243	126	.123		
1 Total	72.037	130			

a. Dependent Variable: Organizational Performance of County governments in ElgeyoMarakwet County

B. Predictors: (Constant), Data Management, Digital Culture, Technical Capacity, And Digital Literacy Management

Beta Coefficient Analysis

Beta Coefficients as unknown constants that are projected from the data which are connected to particular independent variables (Peterson & Brown, 2005). These coefficients enable the measurement of the size of change in an independent variable and the manner in which this affects the dependent variable when the rest of the independent variables are held constant. The results of the Beta Coefficients of the study variables are shown in Table 4.8. The values of the constants and coefficients enabled the generation of the following multiple regression model:

$$\begin{aligned}
 Y &= \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon \\
 &= 4.522 + 0.472X_1 + 0.159X_2 + 0.057X_3 + 0.165X_4 + 0.593
 \end{aligned}$$

Where, Y refers to the dependent variable (organizational performance of County governments in ElgeyoMarakwet County), X₁ refers to the data management, X₂ refers to the digital culture, X₃ refers to the technical capacity, and X₄ refers to the digital literacy application variable.

According to the equation, taking all the independent variables to be zero, organizational performance of County governments in ElgeyoMarakwet County will be a constant equivalent to 4.522. A review of the findings also shows that a unit increase in data management will lead to a 0.472 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Additionally, a unit increase in digital culture will lead to a 0.159 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Further, a unit increase in technical capacity will lead to a 0.057 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Finally, a unit increase in digital literacy application will lead to a 0.165 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Lastly, the p-values for all the variables are all below 0.05, which indicates that they are all statistically significant.

5. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of the study was to examine the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County. The study was guided by the following specific objectives; to establish the influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County, to determine the influence of Digital Culture on organizational performance of County governments in ElgeyoMarakwet County, to analyze the influence of Technical Capacity on organizational performance of County governments in ElgeyoMarakwet County and to assess the influence of Digital Literacy Applications on organizational performance of County governments in ElgeyoMarakwet County. This chapter presents the summary of the findings, conclusions made from the same, its recommendations and recommendations for further studies.

Summary of the findings

Influence of Data Management on organizational performance of County government in ElgeyoMarakwet County.

The first variable was to establish the influence of Data Management on organizational performance of County governments in ElgeyoMarakwet County. The findings specifically indicated that the organization collects and manages the data for

business decisions. The findings also implied that the organization used databases and knowledge base sand that the organization uses management information systems to help it make decisions. The findings also revealed that the digital literacy application embraced by the organization ensures import information and data about the customer is captured. The findings also revealed that Content services are used to capture data at a central place, e.g. records management, data collection and the organization has invested in data management platforms to ensure data is available and secured and backs up its data.

Conclusion

In conclusion basing on the findings, According to the equation, taking all the independent variables to be zero, organizational performance of County governments in ElgeyoMarakwet County will be a constant equivalent to 4.522. A review of the findings also shows that a unit increase in data management will lead to a 0.472 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Additionally, a unit increase in digital culture will lead to a 0.159 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Further, a unit increase in technical capacity will lead to a 0.057 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Finally, a unit increase in digital literacy application will lead to a 0.165 increase in organizational performance of County governments in ElgeyoMarakwet County when all other independent variables are held constant. Lastly, the p-values for all the variables are all below 0.05, which indicates that they are all statistically significant.

Recommendations

The study came up with a number of recommendations. The study recommends that the organization used databases and knowledge in making decisions and adopt content services to capture data at a central place, e.g. records management, data collection and the organization has invested in data management platforms to ensure data is available and secured and backs up its data.

Areas for further research

The study focused on examining the influence of digital literacy on the organizational performance of County governments in ElgeyoMarakwet County. A similar study should be done on other counties to ascertain the digital literacy.

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