THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE,
PUBLIC SERVICE MANAGEMENT AND
GOOD GOVERNANCE

TANZANIA PUBLIC SERVICE COLLEGE

SINGIDA CAMPUS

RESEARCH REPORT ON

EFFECTIVENESS OF IMPLEMENTING ELECTRONIC OFFICE SYSTEM FOR MAIL MANAGEMENT FROM SELECTED TANZANIA PUBLIC INSTITUTIONS: SUCCESS AND CHALLENGES

RESEARCH TEAM:

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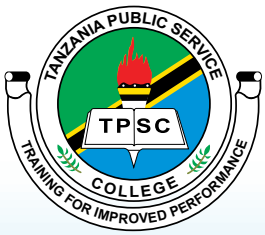

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It can be cited as:
Msakila G., Barnabas E., Kilasi M., Salama A., Ngudungi C., Ng'wanakilala M., Tandika E. and Kashaija L. (2025). Effectiveness of Implementing Electronic Office System for Mail Management from Selected Tanzania Public Institutions: Success and Challenges. (A Research Report)

Research Report, August 2025

This research report is part of a series of College's Research works emanating from Applied Research aimed at improving the conduct of the Public Service in Tanzania. This initiative is funded and implemented annually by Tanzania Public Service College (TPSC).

ACKNOWLEDGEMENTS

We would like to express our heartfelt gratitude to all individuals and institutions whose support and contributions made it possible to successfully complete this research titled *"Effectiveness of Implementing Electronic Office System for Mail Management from Selected Tanzania Public Institutions: Success and Challenges."* First and foremost, our sincere appreciation goes to Dr. Ernest Francis Mabonesho, Rector and Chief Executive Officer of the Tanzania Public Service College (TPSC), for his invaluable leadership and remarkable institutional support throughout the research process. Special thanks are also extended to Dr Emmanuel Tandika, Campus Director at Tanzania Public Service College, Singida Campus, and Dr Hamis Amani, Deputy Rector – Academic, Research and Consultancy (DR-ARC), for their unwavering commitment, far-fetched guidance, and continuous encouragement throughout the completion of this study.

We are equally grateful to the dedicated staff members of TPSC Singida Campus, whose cooperation and assistance were instrumental in accomplishing various aspects of this research. Our deep appreciation also goes to all participants from the following institutions who generously shared their time, insights, and experiences to enrich the findings of this study; President's Office – Public Service Management and Good Governance (PO-PSM&GG); Planning Commission (PC); Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG); University of Dodoma (UDOM); Occupational Safety and Health Authority (OSHA) and the e-Government Authority (eGA). Your engagement and contribution have been vital in shaping the direction and depth of this research. To all who contributed in one way or another to the completion of this work, whether through professional insight, moral support, or administrative assistance, we extend our sincere thanks and appreciation.

ABBREVIATIONS

ATM	:	Adoption and Technology Model
CPU	:	Central Processing Unit
CRU	:	Central Registry Unit
CRU	:	Central Registry Unit
DMS	:	Document Management System
DR-ARC	:	Deputy Rector – Academic, Research and Consultancy
EDRMS	:	Electronic document and records management system
eGA	:	Electronic Government Authority
e-Gov	:	Electronic Government
e-Office	:	Electronic Office System
ERMS	:	Electronic Records Management System
ESARBICA	:	Eastern Southern Africa Regional Branch of the International Council of Archives
FOI	:	Freedom of Information
FOIA	:	Freedom of Information Act
GDPR	:	General Data Protection Regulation (UK/EU)
GMS	:	Government Mailing System
GoT	:	Government of Tanzania
GoVNet	:	Government Network
GPS	:	Global Positioning System.
HQ	:	Headquarters
HR	:	Human Resources
HRD	:	Human Resource Development
HRO	:	Human Resources Officers
ICT	:	Information and Communication Technology
IEM	:	Implementation Effectiveness Model
IRMT	:	International Records Management Trust
ISO	:	International Organization for Standardization
IT	:	Information Technology
LAN	:	Local Area Network
LGAs	:	Local Government Authorities
M&E	:	Monitoring and Evaluation

MCDGWSG	:	Ministry of Community Development, Gender, Women and Special Groups
MDAs	:	Ministries, Departments, and Agencies
MFA	:	Multi-factor Authentication
MIS	:	Management Information System
NIDA	:	National Identification Authority (Tanzania)
OSHA	:	Occupational Safety and Health Authority
PC	:	Planning Commission
PEOU	:	Perceived Ease of Use
PEPMIS	:	President's Office – Public Service Management Information System
PIPEDA	:	Personal Information Protection and Electronic Documents Act
PO-PSMGG	:	President's Office – Public Service Management and Good Governance
PO-RALG	:	President's Office – Regional Administration and Local Government
PU	:	Perceived Usefulness
RAMD	:	Records and Archives Management Department
RAS	:	Regional Administrative Secretary
RIM	:	Records and Information Management
RITA	:	Registration, Insolvency and Trusteeship Agency
ROI	:	Return on Investment
SMART	:	Specific, Measurable, Achievable, Relevant, and Time-bound
SPSS	:	Statistical Package for Social Sciences
TAM	:	Technology Acceptance Model
TCRA	:	Tanzania Communications Regulatory Authority
TIM	:	Technology Implementation Model
TPSC	:	Tanzania Public Service College
UDOM	:	University of Dodoma
UK	:	United Kingdom
URT	:	United Republic of Tanzania
VPN	:	Virtual Private Network
WAN	:	Wide Area Network
Wi-Fi	:	Wireless Fidelity

ABSTRACT

This study assessed the effectiveness of the Electronic Office System (e-office) for mail management at the President's Office–Public Service Management and Good Governance (PO-PSM&GG), Planning Commission (PC), the Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG), Planning Commission (PC), University of Dodoma (UDOM), Occupational Safety and Health Authority (OSHA) and the e-Government Authority (eGA). These institutions were chosen for their roles in public administration, policymaking, service delivery, and digital transformation. The study focused on e-office achievements, organisational capabilities, employees' perceptions, and implementation challenges. A convergent parallel mixed design was used, with 82 participants who were purposively and conveniently selected from key administrative roles, achieving a 64.1 per cent response rate. Data were gathered through questionnaires, interviews, and observations.

The study found that the e-office system was fully implemented in the selected institutions, supported by widespread internet access through national optical fibre. While usage varied across institutions, the system significantly modernised mail management, addressing challenges related to paper records and improving service delivery. The system enhanced efficiency, records retrieval, storage capacity, and security. However, institutional capabilities for e-office implementation varied, with some institutions demonstrating high capacity and others moderate. Organisational readiness ranged from mild to high, although some uncertainty remained. The quality of ICT infrastructure affected system performance, and while most users were confident in using the system, some lacked full operational privileges. Efforts to promote e-office usage varied, including legal tools, internal guidelines, and memos. Challenges such as financial constraints, resistance to change, system design issues, process duplication, technical skill gaps, unreliable internet connectivity, and inadequate IT resources hindered effective e-office implementation.

In conclusion, the e-office system has successfully modernised mail management in the selected Tanzanian public institutions, contributing to improved service delivery. However, institutional disparities in ICT infrastructure and user operational privileges need to be addressed. The study recommends establishing clear policies and guidelines, limiting VPN usage, and strengthening leadership support to overcome resistance. It also advocates allocating sufficient financial and human resources, providing ongoing training, investing in standardised ICT infrastructure, improving security protocols, implementing performance monitoring, and enhancing user awareness programs. Therefore, the government and public institutions' management should take proactive steps to strengthen institutional readiness, address identified challenges, and ensure the sustainability of the e-office system.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

1.1. Chapter Overview

This chapter provides an overview of the study, including the background, statement of the problem, objectives, significance, scope, and operational definitions of key terms used throughout the study.

1.2. Background to the Study

Electronic office (e-office) is a mail management system that captures, registers, distributes and provides access to records in an organisation over time (Smallwood, 2013). Electronic office system, which is used for mail management, has dramatically reduced paperwork and facilitated efficiency, effectiveness and reduced delays in information retrieval (Chang'a & Mwilongo, 2022). It has also minimised costs, improved accountability, and enhanced transparency and decision-making, while preventing the loss of files in many organisations. In the recognition of such potential benefits, many countries worldwide have made efforts to implement e-office systems for mail management (McKinsey, 2023).

Globally, developed countries have successfully implemented e-office. Indonesia, one of the countries in the Southeast Asia continent, has streamlined the electronic office for all Yogyakarta Government offices. As a result, both public and private institutions in Indonesia enjoy the benefits of an e-office system as it controls security and confidentiality of records (Sutirman & Sasmita, 2017). In Yemen, an e-office system has led to significant reforms in the education sector, whose employees enjoy a better work-life balance resulting from reduced paperwork (Mukred, Yusof, Mokhtar & Fauzi, 2019).

England and Canada have made significant efforts to implement electronic records management systems by enhancing technological infrastructures and integrating e-records systems into their policies, laws, legislation, and standards. For instance, in England, frameworks such as the Public Records Act 1958 (UK Government, 1958), the Freedom of Information Act 2000 (UK Government, 2000), and the General Data Protection Regulation (GDPR) (European Union, 2016) have been instrumental in fostering effective records management. Similarly, Canada has adopted measures such as the Library and Archives of Canada Act (Government of Canada, 2004), the Personal Information Protection and Electronic Documents Act (PIPEDA) (Government of Canada, 2000), and the Directive on Recordkeeping (Treasury Board of Canada Secretariat, 2011). These legal and regulatory frameworks have provided a robust foundation for achieving significant progress in electronic records management (Smallwood, 2013). In India, the agenda of implementing electronic office has been a strategic issue whereby electronic metadata is prepared at the

Central Registry Unit (CRU), and sharing is implemented with other units around the government to support decision-making (Aggarwal, Jaiswal, & Negi, 2014; Ibrahim & Abdulrahman, 2016).

In recent years, various African countries have implemented e-office systems in different stages, facing technological challenges (Kamatula & Kemon, 2018). In Eswatini Government ministries, the e-office is at an infant stage with insufficient technological infrastructures, hence distorting fast decision-making, accountability and transparency (Tsabedze, 2021). Kenya is also working to integrate paper records automation into e-office systems for effective mail management across government ministries. As reported by Ambira, Kemoni and Ngulube (2019), the primary obstacle to implementing records automation lies within the national archives, which appear to be making minimal efforts to facilitate the transition to automated systems. A significant challenge is that the existing legislative framework, particularly the governing Act, does not provide adequate provisions for the automation of records. As a result, integrating records into various electronic platforms, including e-office systems, remains unsupported and unprioritised. This legislative gap continues to hinder the modernisation of record-keeping practices, further delaying the adoption of digital records management solutions.

In South Africa and Malawi, the transition of records automation into e-office remains in its embryonic stage, mainly due to weaknesses in the legal tools enacted by the governments of such countries to support e-office operations (Kamatula & Kemoni, 2018). For example, in South Africa, while the National Archives and Records Service of South Africa Act, 1996 (Government of South Africa, 1996) provides a framework for managing records, it has not fully addressed specific requirements for e-records management. Similarly, in Malawi, the National Records and Archives Act, 1997 (Government of Malawi, 1997), lays the groundwork for records management but lacks provisions for integrating automation and e-office systems. These legislative gaps hinder the effective adoption and operation of e-office systems in both countries. Other countries in the Eastern Southern Africa Regional Branch of the International Council of Archives (ESARBICA) region still face technological and legal challenges that hinder the effective implementation of e-office systems for mail management, which is crucial for improving service delivery through fast decision-making (Ambira et al., 2019).

In Tanzania, significant efforts have been made towards implementing e-office systems for mail management in the public sector. These initiatives include the establishment of various legal and regulatory frameworks such as the Cybercrime Act No. 14 (2015), the Records and Archives Management Act No. 3 (2002), the Electronic Transactions Act (2016), and the Records and Archives Management Policy (2011), which emphasize the use of technology in records management (Msakila, 2022).

Another notable effort was the introduction of the Electronic Records Management System (ERMS) in 2015, aimed at automating registry services within Ministries, Departments, and Agencies (MDAs). In December 2016, the President's Office - Public Service Management and Good Governance (PO-PSMGG) launched the e-file management module as a component of the ERMS (Masanja & Lwoga, 2021). Furthermore, Circular No. 2 of 2021 with reference No. CAC.44/472/01/A/76 mandated all public institutions to adopt and utilise e-office systems. This directive has been a key driver for transitioning from paper-based record-keeping to electronic records in many public institutions (Government of Tanzania, 2021).

Furthermore, electronic records management, including e-office agendas, has been made a strategic issue since 2012 due to the transition from analogue to digital. The establishment of the Electronic Governance Authority (eGA) as an institution for enhancing e-government has also spearheaded the use of e-office in government offices (Kamatula, 2012). In 2020, the Electronic Government Act was enacted, which acted as a catalyst for the automation of government activities into an electronic environment, including the use of e-office systems for mail management in Ministries, Departments and Agencies (MDAs), Local Government Authorities (LGAs) and Central Government (Msakila, 2022).

Despite the global shift towards e-office systems and their recognised benefits in improving efficiency and service delivery, their implementation in public institutions, especially in developing countries, remains inconsistent and underexplored. Tanzania has invested significantly in ICT infrastructure to support e-government initiatives, yet challenges such as inadequate legal frameworks, technical limitations, and resistance to change hinder full adoption. Examining the effectiveness of e-office systems in public institutions is essential in understanding their impact, identifying challenges, and exploring opportunities for improvement. Addressing these issues will facilitate a smoother transition to digital records management and contribute to the broader goal of enhancing governance and public service efficiency.

1.3. Statement of the Problem

The implementation of electronic office (e-office) systems has the potential to significantly improve mail management, enhance efficiency, reduce paperwork, minimise costs, prevent file loss, and strengthen accountability, transparency, and decision-making processes in public institutions (Chang'a & Mwilongo, 2022). Globally, many governments have adopted these systems to modernise records management and enhance service delivery. However, despite the recognised benefits and increasing adoption worldwide, the actual effectiveness of e-office systems in developing countries, including Tanzania, remains underexplored (Chang'a & Mwilongo, 2022).

In Tanzania, the government has made significant investments in ICT infrastructure and implemented e-office systems as part of its digital transformation agenda (Msakila, 2022). However, several challenges persist, including inadequate legal frameworks, technical limitations, institutional resistance, and a continued reliance on manual systems due to limited ICT adoption (Government of Tanzania, 2011; Newa, 2019). Previous studies indicate that poor records management remains a significant obstacle in Ministries, Departments, Agencies (MDAs), and Local Government Authorities (LGAs) (Government of Tanzania, 2016; Newa, 2019). Similarly, research in Sub-Saharan Africa highlights the underutilisation of ICT tools and inadequate e-records management practices as key barriers to digital transformation (Hamad, 2018). These challenges hinder the full realisation of the intended benefits of e-office systems in Tanzania's public institutions, particularly at the local government level, where weak infrastructure, budget constraints, and insufficient training slow the transition from paper-based to digital records management (Kashaija, 2021).

Despite the ongoing efforts, the successes and challenges of implementing e-office systems in Tanzania have not been comprehensively studied, especially across multiple public organisations. Previous studies on e-office, such as those by Kashaija (2023) and Masanja and Lwoga (2022), primarily focused on single public institutions, which limits the generalisability of their findings to a broader range of government entities. While some institutions report improvements in efficiency and decision-making, others continue to face operational and technical constraints. Given that several years have passed since the introduction of e-office systems, it is crucial to assess their actual impact across a diverse set of public organisations, identify persisting challenges, and explore opportunities for optimisation. Without such a broad evaluation, inefficiencies may continue, leading to wasted resources, inadequate policy adjustments, and limited improvements in public service delivery.

This study, therefore, seeks to fill the gap left by previous research by examining whether the intended objectives of e-office implementation have been achieved across various public institutions in Tanzania. It aims to identify factors hindering effective adoption and provide actionable recommendations for government policymakers and stakeholders to enhance the implementation process. By recognising key challenges and opportunities for improvement, this study will contribute to optimising e-office systems for greater efficiency, transparency, and accountability. Ultimately, the findings will support informed decision-making and policy adjustments, ensuring that ICT investments in the Tanzanian public sector are maximised and lead to meaningful progress in digital governance.

1.4. Objectives of the Study

1.4.1. General Objective

To explore the effectiveness of implementing an electronic office system for mail management in selected public institutions in Tanzania.

1.4.2. Specific Objectives

The specific objectives of the research were to:

i. Assess the achievement of e-office for mail management.

ii. Analyse the organisational capability in implementing the e-office System for Mail Management;

iii. Assess employees' perceptions in the implementation of the e-office system for mail management;

iv. Identify the challenges encountered in implementing the e-office system for mail management.

1.5. Research Questions

During the research, the following key questions were considered:

i. What are the key achievements in the use of the e-office system for mail management?

ii. Do organisations possess adequate capability to implement the e-office system for mail management effectively?

iii. How do employees perceive the implementation of the e-office system for mail management?

iv. What challenges do organisations encounter in implementing the e-office system for mail management?

1.6. Significance of the study

The findings of this study serve as a catalyst for public institutions to enhance the implementation of the e-office system for mail management by identifying both strengths and weaknesses. The evaluation will provide a clearer understanding of areas where institutions excel in utilising the system and where improvements are necessary, ultimately facilitating a more effective and efficient approach to digital records management.

For the Government, the study highlights the need to expand the coverage of national optic fibre as a foundational platform for the e-office system, particularly in underserved areas such as Local Government Authorities (LGAs). The findings underscore how limited ICT infrastructure in these areas has slowed digital transformation, affecting public service delivery. Expanding connectivity will ensure

a more inclusive and uniform adoption of e-office systems across all government levels.

For the e-Government Agency (eGA), the study provides valuable insights into the extent to which public institutions comply with ICT legal frameworks related to e-office implementation. Additionally, it assesses the effectiveness of the approved software and hardware used in public offices, identifying system inefficiencies and areas that require improvement. These insights will help refine existing frameworks and ensure that future e-office deployments align with national digital strategies.

The President's Office – Public Service Management and Good Governance (PO-PSMGG) will benefit from the study by gaining a comprehensive understanding of the progress, challenges, and impact of e-office implementation across public institutions. The study's recommendations highlight critical gaps that need to be addressed to improve system functionality and user experience. Additionally, the study provides solutions to common complaints raised by public servants regarding e-office usage, thereby enhancing the overall effectiveness and adoption of the system.

The Records and Archives Management Department (RAMD) can utilise the study findings to provide more targeted professional assistance in records and archives management. The study has identified specific limitations in the functionality of the current e-office system version, which can inform the development of future upgrades. Furthermore, the findings serve as a helpful reference in training programs aimed at strengthening digital records management practices within public institutions.

For the Tanzania Public Service College (TPSC), the study aligns with its mandate of conducting applied research to support government policy implementation and review. The insights gained from this study contribute directly to the College's training programs, equipping public servants with the knowledge and skills necessary for effective e-office utilisation.

Practically, the study findings act as a catalyst for encouraging public servants to upgrade their digital skills. By understanding the challenges, employees get empowered to advocate for better infrastructure and support, participate actively in training programmes and become more open and adaptable to future tech-based reforms in the public sector. This is likely to build their confidence in handling various IT systems, which is a critical factor in a digitised government environment.

Finally, this study adds to the existing body of knowledge on e-government implementation by providing up-to-date literature on the practical challenges and successes of e-office adoption in Tanzanian public institutions. Future researchers can use these findings as a foundation for further studies on digital records management, e-government policies, and ICT integration in the public sector.

1.7. Scope of the Study

The study explored the effectiveness of implementing an electronic office system for mail management in selected Tanzanian public service institutions (MDAs). Specifically, the study investigated the system's functionality, efficiency, user satisfaction, and impact on organisational performance, identifying both achievements and challenges. Additionally, it proposed strategies for improvement. The institutions studied include; The President's Office – Public Service Management and Good Governance (PO-PSM&GG), the Planning Commission (PC), the Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG), the University of Dodoma (UDOM), the Occupational Safety and Health Authority (OSHA), and the e-Government Authority (eGA). These institutions were selected because they have been using the e-office system for more than five years. However, the strengths and challenges of the system's usage have not been systematically studied. The inclusion of these institutions in this study helped the researchers to identify both areas of excellence, for further enhancement, and areas needing improvement, which could benefit other institutions that are in the early stages of adopting the e-office system.

1.8. Limitations and Delimitation of the Study

The study faced several limitations that might have affected its comprehensiveness and applicability as follows;

Geographical Distance

The significant distance between the selected institutions posed a challenge to data collection due to financial constraints. This issue was addressed by dividing the data collection team and assigning each group specific institutions. As a result, all the planned institutions were successfully reached.

Accessibility to Targeted Respondents

Accessing some of the targeted respondents, such as Permanent Secretaries and senior ministry officials, was challenging due to their busy work schedules. This challenge was mitigated by obtaining the required information from their assistants, ensuring the study's objectives were achieved.

Time Constraints

The study was conducted within a limited timeframe, which posed a challenge to completing the research. To address this, extra time outside of regular working hours was utilised, enabling the successful completion of the research activities.

Limited Sample of Institutions

The number of institutions studied was relatively small compared to the total number of institutions using the e-office system. This was addressed by selecting a representative sample of institutions, including ministries, independent departments, and agencies (MDAs). While this provided representation from key categories, the findings can be generalised to other institutions outside the sampled group.

1.9. Definition of Key Terms

1.9.1. Effectiveness

In this research, effectiveness refers to the extent to which the e-office system achieves its intended outcomes, such as improving service delivery, reducing delays, enhancing communication, and ensuring better record-keeping in mail management (Kim, Zhang, & Lee, 2022).

1.9.2. Electronic Records

Information or data that is captured and stored for manipulation in an automated system and that require the system to render them intelligible (Smallwood, 2013). Unlike traditional paper records, electronic records exist in a non-physical, digital realm, making them accessible through various electronic devices (Frank, 2019). For this study, electronic records refer to all digital records created, received, and distributed using e-office systems from selected Tanzanian public service institutions (MDAs).

1.9.3. E-office System

This is an application system that has been designed to coordinate with the needs of a modern government in receiving, registration, distribution and storage of records in electronic format (Ibrahim et al., 2019). For this study, the e-office refers to the electronic records management system (ERMS), which is utilised for receiving, registering, distributing, and storing records created by selected Tanzanian public service institutions (MDAs) in the digital era.

1.9.4. E-governance

E-governance is defined as the application of communication and information technology for providing government services, exchange of information, transactions, and integration of previously existing services and information portals (Kamatula, 2018). It makes the whole administrative process convenient, efficient, transparent, fully accountable and responsible (Government of Tanzania, 2020). For this study, e-governance refers to the use of communication and information technology

to provide services to citizens through technological modalities (Paperless) in Tanzania, specifically in selected MDAs.

1.9.5. Mail

Means of correspondence, such as letters carried in a postal system, resulted from the conduct of government business activities (Hunter, 2020). It is delivered to the mailbox or post office box, including letters, bills, packages, magazines, or anything else that is sent through the postal service. For this study, emails refer to the electronic letters /correspondences received from the work of selected MDAs and other government stakeholders in performing their daily activities.

1.9.6. Mail Management

According to Saffady (2021), mail management refers to an efficient run program for rapid and economic distribution of information from one department to another within the organisation and across organisations. Such a program ensures that mail is delivered and received quickly so that work is accomplished without delay. For this study, mail management refers to the process of receiving, registering, distributing, and storing created correspondences in digital format within the selected MDAs.

1.9.7. Records Management

A professional field that involves the efficient and systematic control of the creation, receipt, maintenance, use, and disposition of records to support operational efficiency and legal compliance (ISO 15489-1:2016).

1.9.8. Digital Transformation

The integration of digital technologies into all areas of public or private sector organisations, fundamentally changing how they operate and deliver value to stakeholders (World Bank, 2023)

1.9.9. Virtual Private Network (VPN)

A secure network connection that enables authorised users to access organisational systems remotely while safeguarding data integrity and confidentiality (Kim, Zhang, & Lee, 2022).

CHAPTER TWO: LITERATURE REVIEW

2.1. Chapter Overview

This chapter provides a review of the relevant literature aligned with the specific objectives of the study. It also outlines the theoretical and conceptual frameworks of the study, identifying research gaps.

2.2. Overview of e-office

Electronic office (e-office) stands for a vast area of text processing, including creating, editing, formatting, viewing, mailing, circulating, broadcasting, fetching, storing and retrieving documents (Government of Tanzania, 2020). The system is currently advanced and efficiently provides various functionalities required for document transfer (Ambira, 2015). The implementation of e-office systems is rapidly replacing traditional office mail management systems as a means of sending correspondence between terminals on a computer system, where emails can be stored digitally. This means both record users and custodians can reduce their reliance on paper-based filing systems (Yousafzai, 2014). This has been achieved through the development and operationalisation of e-office systems in file management to facilitate access for registry procedures (Government of Tanzania, 2019).

2.3. Achievements on the Use of E-office for Mail Management

This section examines the use of the e-office system and its contribution to improving mail management by streamlining processes, reducing paper usage, enhancing efficiency, and promoting transparency. Key achievements include enhanced records security, cost savings, and improved decision-making, providing valuable insights into the system's transformative impact on organisations.

The global shift toward e-office systems has been driven by the need to minimise delays and resource wastage associated with paper-based records, providing a convenient and collaborative platform for managing records throughout their lifecycle (Naksumpurana, Phichitchaisopa & Wang, 2024). These systems are increasingly utilised for various tasks, including creating, receiving, sending, replying, storing, securing, classifying, and disposing of records (Mannan, Aziz & Rahman, 2018). Moreover, a study by Alhassan, Sammon and Daly (2020) highlights that e-office systems contribute to operational efficiency by integrating with other ICT tools, fostering organisational effectiveness.

The use of e-office systems for mail management has increased significantly due to their efficiency in handling organisational communication. These systems integrate various technological tools to streamline the processing, routing, and storage of electronic mail, resulting in notable achievements such as reduced processing times

and improved accuracy in mail handling (Khan, Ahmed & Malik, 2022). For instance, Patel and Venkatesh (2021) reported a 30 per cent reduction in mail processing time in a public sector organisation due to the automation and digitisation facilitated by the e-office system. Additionally, these systems enhance accountability and transparency by enabling the tracking and monitoring of mail activities, ensuring compliance with organisational policies (Agarwal & Choudhury, 2023).

Furthermore, Makala and Barongo (2024) examined the influence of the e-office system on employees' performance at the National Identification Authority (NIDA) in Tanzania. Their findings revealed that the e-office system improved employee performance by automating and streamlining communication processes, thus enhancing efficiency and enabling employees to focus on more strategic tasks. The study also highlighted that the e-office system contributed to a more organised and secure environment, further facilitating quicker decision-making and promoting transparency within the institution. This aligns with the broader trend of increased operational efficiency and improved service delivery facilitated by the e-office system.

2.4. Organisational Capability in implementing e-office for Mail Management

This subsection explores the capacity of institutions to successfully implement e-office systems for mail management, focusing on factors such as technological infrastructure, human resource skills, policy frameworks, and organisational readiness required to support the adoption and effective use of the system.

Institutional capability plays a vital role in the successful implementation of e-office systems for mail management. The adoption and effective utilisation of these systems depend primarily on the organisation's technological infrastructure, skilled human resources, and management support (Nair & Singh, 2023). Organisations with robust IT infrastructure and qualified personnel are better equipped to implement and manage e-office systems efficiently. For instance, well-established IT departments can provide essential technical support, ongoing training, and effective troubleshooting, thereby ensuring a seamless transition to electronic mail management (Siddiqui & Khan, 2024). Leadership commitment is also crucial, as it facilitates the alignment of organisational resources with the strategic goals of e-office implementation (Thomas & Nair, 2022).

However, studies highlight that while e-office systems offer significant advantages, challenges remain, particularly in developing countries. For example, research in Malaysia and Indonesia identified that inadequate ICT infrastructure resulted in poor electronic records planning and frequent reliance on manual processes (Amisa, Ahmad, & Yusof, 2021). Similarly, a study in Egypt revealed that insufficient ICT support hindered the adoption of electronic health records, reflecting broader difficulties in implementing e-government initiatives (Eldin, Abouelela, & Saleh,

2013). These findings emphasise the necessity of robust ICT infrastructure and institutional readiness for the effective adoption of e-office systems.

In East Africa, challenges such as poor ICT infrastructure and weak institutional capabilities have significantly impacted the implementation of e-records and e-office systems. Studies in Kenya and Tanzania underscore the uneven distribution of IT resources and limited technical expertise, which have complicated efforts to adopt electronic records management (Kamatula, 2018). While some Tanzanian public institutions are well-equipped with IT tools, others lag, creating inconsistencies in e-office implementation and overall performance (IRMT, 2011). Additionally, Mwanyika and Mmbaga (2023) noted that limited digital literacy and inconsistent policy frameworks further hinder organisational readiness, exacerbating disparities in implementation outcomes.

To overcome these challenges, organisations must focus on capacity-building measures, such as investing in ICT infrastructure, training programs, and establishing clear policy frameworks to support e-office systems. Leadership engagement and a collaborative organisational culture are also critical to ensuring sustainable implementation and long-term success.

2.5. Employees' Perception in Implementing E-office for Mail Management

Employees' perceptions play a pivotal role in the successful implementation of e-office systems for mail management. Positive perceptions, especially when employees find these systems user-friendly and perceive tangible benefits, are associated with higher acceptance and effective utilisation (Kumar & Gupta, 2022). Conversely, resistance to change, fear of redundancy, and unfamiliarity with technology can significantly hinder adoption (Singh, Sharma, & Singh, 2023). These challenges underline the importance of clear communication about the benefits of e-office systems and comprehensive training programs tailored to employees' needs (Raj & Sharma, 2024).

Human resources form the backbone of successful e-office implementation. The willingness, competence, and active participation of Project Managers, consultants, clerical staff, and Records Managers are critical determinants of success (Chang'a & Mwilongo, 2022; Kamatula, 2019). Studies show that e-government projects, including e-office systems, allocate approximately 10 per cent of their budgets to staff training to ensure adequate preparedness (World Bank, 2021). This investment is crucial for addressing common challenges such as documentation errors, data loss, and reluctance to adopt new systems, particularly among employees accustomed to manual processes (Mutimba, 2014).

Age and experience also influence employees' perceptions of e-office systems. For instance, older employees often perceive these systems as disruptive and a potential threat to their careers, exacerbating resistance (Asogwa, 2020). Additionally, a lack of

ICT skills and digital literacy among employees can impede the effective adoption of e-office systems, as evidenced in studies conducted in Tanzanian public institutions (Kamatula, 2018; Mwanyika & Mmbaga, 2023).

Overcoming these barriers requires a robust change management strategy that addresses employees' concerns and fosters a culture of collaboration and continuous learning. Effective strategies include involving employees in the decision-making process, offering targeted training programs, and creating incentives for early adopters to act as role models (Mutungi & Wanjohi, 2021). Furthermore, leadership commitment to employee empowerment and resource allocation plays a vital role in transforming resistance into acceptance, ensuring the long-term success of e-office systems in mail management (Thomas & Nair, 2022).

2.6. Impediments in Implementing E-office for Mail management and Ways to alleviate them

The implementation of e-office systems for mail management presents numerous challenges, particularly in developing countries, where historical, cultural, and technological barriers persist (Boldyreva, Klimova & Ignatova, 2019). While developed nations benefit from robust ICT infrastructure and high levels of e-readiness, many developing regions struggle with inadequate resources, limiting the full realisation of e-office systems' potential in transforming mail management (Mwanyika & Mmbaga, 2023).

2.6.1. Key Challenges in Implementing E-Office for Mail Management

Implementing e-office systems for mail management in public sector organisations presents several significant challenges. Zhang, Wang and Liu (2023) and Bhatt and Sharma (2022) observed that technical limitations and infrastructure gaps are prominent among these, as many organisations contend with outdated technology, inadequate ICT infrastructure, limited internet connectivity, and insufficient server capacity, all of which hinder the seamless operation of e-office platforms. In developing countries, these challenges are exacerbated by factors such as low penetration of fixed-line telecommunications and inadequate electricity supply, making nationwide deployment of e-government projects challenging (Al-Shafi & Weerakkody, 2010).

Employee resistance to change and low digital literacy further complicate e-office adoption. Fears of job redundancy, discomfort with technology, and a lack of digital skills contribute to reluctance in using e-office systems effectively (Mohan & Jain, 2022; Mwase, 2023). Inadequate training exacerbates this resistance, leading to inefficiencies, errors, and frustration among staff (Kamatula, 2020). Additionally, some employees continue to print electronically received documents, reflecting a deep-rooted preference for paper-based workflows (Lyman & Varian, 2000; Thomas, Ndege & Malisa, 2023).

Financial constraints pose another major challenge, especially in government institutions with limited budgets for ICT development. The initial costs of acquiring and deploying e-office systems, coupled with expenses related to cybersecurity, software updates, and technical support, create barriers to full-scale adoption (Patel & Kumar, 2023). Long-term maintenance costs, including system upgrades and user training, can further strain financial resources, deterring organisations from investing in sustained digital transformation (Singh & Reddy, 2021).

The success of e-office systems heavily depends on leadership support and structured change management. Without clear strategic direction, employees may lack motivation and guidance in transitioning to digital workflows. A lack of policy enforcement and accountability mechanisms further hampers progress, resulting in inconsistent adoption and fragmented system usage (Mosweu, Bwalya & Mutshewa, 2016; Chikumba1, 2022).

Weak records management policies and practices also impede the effective implementation of e-office systems. Many organisations lack structured frameworks for managing electronic records, leading to poorly maintained digital documents, inadequate filing systems, and unclear retention policies. These shortcomings result in inefficiencies in document retrieval, compliance risks, and information mismanagement (Okello-Obura, 2012; Asogwa, 2018). In local government institutions, the absence of skilled personnel and standardised procedures for managing electronic records further complicates the adoption process (Kashaija, 2021; Nyangila, 2022).

Addressing these challenges requires a comprehensive approach, including investing in robust ICT infrastructure, providing employee training, securing adequate funding, demonstrating strong leadership commitment, and establishing clear records management policies.

2.6.2. Strategies to Mitigate Implementation Challenges

To address the challenges associated with implementing e-office systems for mail management, organisations should adopt a multi-faceted approach. One of the primary strategies is investing in ICT infrastructure and system integration. Organisations must prioritise scalable and interoperable e-office systems that integrate seamlessly with existing digital tools. Strengthening internet connectivity, expanding data storage capabilities, and ensuring system compatibility enhance efficiency and reduces workflow disruptions (Nguyen, Chen & Chan, 2021). Additionally, enhancing employee training and digital literacy is essential in overcoming resistance to change. Comprehensive and continuous training programs tailored to employees' skill levels, including practical workshops, hands-on sessions, and mentorship programs, can improve digital confidence and proficiency in using e-office systems (Mwase, 2023). Organisations should also implement user-friendly interfaces and on-demand technical support to facilitate smooth adoption.

Another crucial strategy is allocating sufficient budget for system implementation and maintenance. Governments and organisations should consider long-term budget planning for e-office implementation, ensuring funds are allocated for hardware upgrades, cybersecurity measures, and regular software updates (Singh & Reddy, 2021). Exploring cost-effective solutions, such as cloud-based platforms, can reduce infrastructure costs while ensuring system reliability. Furthermore, strengthening leadership support and change management is vital. Organisational leaders play a crucial role in driving digital transformation by actively communicating the benefits of e-office systems, involving employees in decision-making and addressing concerns through transparent discussions (Mosweu et al., 2016). Establishing a dedicated change management team can facilitate smoother transitions and provide on-going support during implementation.

Developing robust electronic records management policies is also critical. Implementing clear policies and guidelines for managing digital records will ensure consistency, compliance, and accountability. Organisations should establish standardised classification systems, metadata frameworks, and access controls to enhance document security and retrieval efficiency (Chikumba, 2022). Additionally, enforcing digital governance frameworks will help sustain e-office adoption and prevent regression to manual processes. By addressing these challenges through strategic investment, employee engagement, and policy enhancements, organisations can optimise the implementation of e-office systems, improving efficiency, transparency, and sustainability in mail management.

2.7. Studies on the Implementation of E-office for Mail Management

2.7.1. Studies Conducted Outside Africa

This subsection reviews relevant studies conducted outside Africa, within Africa, and in Tanzania, regarding the implementation of e-office systems in public institutions for mail management.

2.7.2. Studies Conducted Outside Africa

Research in developed countries has extensively examined the effectiveness of e-office systems in public institutions. Smith and Johnson (2022) conducted a study in the United States, which found that e-office systems led to significant improvements in mail processing efficiency and accuracy. Their study highlighted a 25 per cent reduction in processing time and a 15 per cent decrease in mail errors, attributing these improvements to advanced automation and real-time tracking features. Similarly, a study by Müller, Fischer and Schmidt (2023) in Germany reported that public institutions experienced enhanced document security, streamlined communication channels, and higher administrative productivity due to e-office systems. These systems reduced document loss and ensured that crucial information was more accessible on time.

Furthermore, research in Asia has also documented the benefits of e-office systems. Zhang and Liu (2022) conducted a study in China that found the implementation of an e-office system reduced mail handling time by 20 per cent and increased staff satisfaction due to improved workflow management. Their study also emphasised the critical role of user training and post-implementation support in ensuring successful adoption. Additionally, Lee and Choi (2023) investigated the impact of e-office systems in South Korea. They found that these systems contributed to improvements in document retrieval times, reduced physical storage needs, and greater overall workflow efficiency, which positively impacted administrative productivity and employee satisfaction.

2.7.3. Studies Conducted in Africa

In Northern Africa, several studies have explored the impact of e-office systems on public sector operations. A study by El-Hady and Hassan (2023) in Egypt revealed that while e-office systems improved mail management efficiency, challenges related to system integration and user resistance remained significant. Their study cited difficulties with infrastructure readiness and a lack of sufficient training programs faced by many institutions. These challenges highlighted the need for strategic investments in IT infrastructure and human resource development to exploit the potential of e-office systems fully.

In West Africa, a study by Adeyanju (2023) at the University of Lagos, Nigeria, revealed that implementing electronic records management systems, akin to e-office platforms, led to significant improvements in administrative efficiency and a notable reduction in manual processing errors. Despite these gains, the research highlighted key barriers such as limited ICT infrastructure and the high costs of implementation, which constrained the broader adoption of such systems. Similar challenges have been reported in Ghana and Kenya, where studies by Osei and Nyarko (2021) and Asogwa and Idowu (2020), respectively, identified factors such as inadequate infrastructure, employee resistance to technological change, and lack of sufficient training as significant obstacles to effective e-office system implementation. Collectively, these findings emphasise the need for strategic capacity-building initiatives and increased investments in digital infrastructure to enhance the effectiveness and scalability of e-office systems across the region.

2.7.4. Studies Conducted in Tanzania

In Tanzania, research on the effectiveness of e-office systems is still emerging. A study by Mrema and Mkungu (2023) examined the implementation of e-office systems in selected public institutions in Dar es Salaam and found that while there were improvements in mail management efficiency, challenges such as limited technical support and insufficient training were prevalent. Their study underscored the need for a more comprehensive approach to the implementation of the system, including enhanced training and infrastructure development.

Another recent study by Mgaya and Shayo (2024) investigated the use of e-office systems in the Tanzanian public sector and identified issues related to system customisation and user adaptation. The study identified challenges related to system customisation and user adaptation. Their research emphasised the importance of providing tailored solutions for various departments, alongside ongoing technical support, to ensure the effectiveness of e-office systems. Furthermore, the study by Msuya and Sanga (2022) highlighted the need for better collaboration between the government and private sector vendors to overcome barriers to the successful adoption of e-office systems. Their findings also pointed out the importance of creating policies that support the integration of digital solutions into public sector operations, addressing issues such as data security and system interoperability.

In summary, while studies from developed and developing countries alike indicate that e-office systems can significantly improve mail management and administrative efficiency, they also reveal consistent challenges, particularly related to infrastructure, training, system customisation, and user adaptation. These challenges, which are prevalent in both African and Tanzanian contexts, require a comprehensive approach to e-office implementation that includes infrastructural investment, tailored training programs, and ongoing technical support to ensure long-term success.

2.8. Theoretical Framework

The study was guided by two models: The Implementation Effectiveness Model (IEM) and the Technology Implementation Model (TIM), which were used to complement each other and address all variables related to the study's objectives.

2.8.1. Implementation Effectiveness Model (IEM)

The Implementation Effectiveness Model (IEM), proposed by Klein, Conn, and Sorra (2001), originated from research conducted in 39 manufacturing industries that implemented computerised manufacturing technology. The model highlights management support, financial resources, implementation policies and practices, and implementation climate as critical determinants for the effective implementation of organisational innovations. Despite its valuable insights, the IEM has several weaknesses. It was developed within the context of manufacturing industries, which limits its applicability to other sectors such as public institutions. Additionally, the model focuses on a single innovation, restricting its relevance to complex systems like e-office, which often involve multiple concurrent innovations. Moreover, its reliance on quantitative methods may have overlooked qualitative factors, such as cultural or political influences, as observed by Sawang and Unsworth (2011).

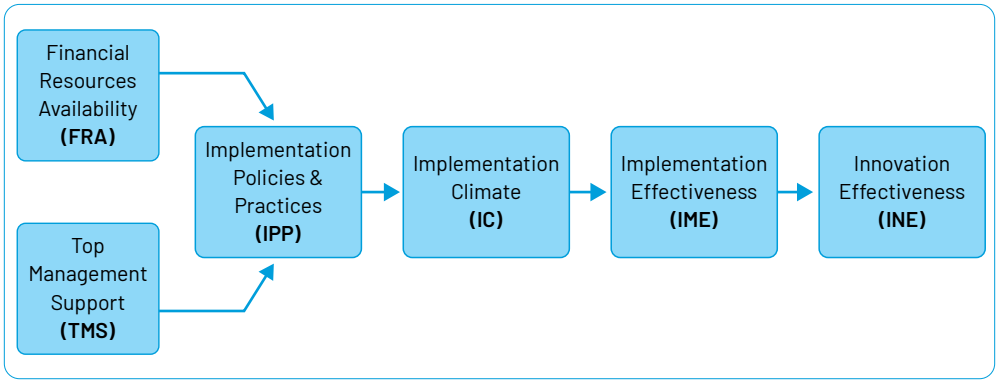

Figure 2.1: Implementation Effectiveness Model (Klein et al., 2001)

The IEM (Implementation Effectiveness Model) makes valuable contributions to this study by emphasising key factors such as resources, policies, and the implementation climate, which are essential for the successful adoption of the e-office system for mail management in public institutions. By focusing on these critical elements, the model effectively addresses the challenges of implementing technological innovations within complex organisational settings.

The IEM supports Objective 2 by examining organisational resources and the implementation climate, which are vital for assessing the capacity to adopt the e-office system. Additionally, the model addresses Objective 4 by identifying challenges such as resource limitations, policy barriers, and environmental factors that hinder the effective implementation of the e-office system in public institutions.

2.8.2. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), developed by Davis (1989), is a behavioural and predictive framework designed to assess user acceptance of information systems. The model emphasises individual perceptions, such as perceived usefulness and perceived ease of use, as critical factors influencing the adoption and use of technology. This foundation aligns with the study's objectives, explicitly focusing on individual factors (Objective 1) and organisational factors (Objective 3) that predict the use or non-use of an information system like the e-office system.

However, the TAM has notable limitations. One major criticism is its narrow focus on individual factors, often overlooking broader organisational and environmental influences that can significantly affect technology adoption (Bagozzi, 2007). This limitation renders the model less effective in capturing the complexities of technology implementation in organisational settings. Additionally, TIM has been criticised for being overly simplistic when applied to complex systems and dynamic organisational contexts, where multiple factors interact to shape implementation outcomes (Venkatesh & Davis, 2000).

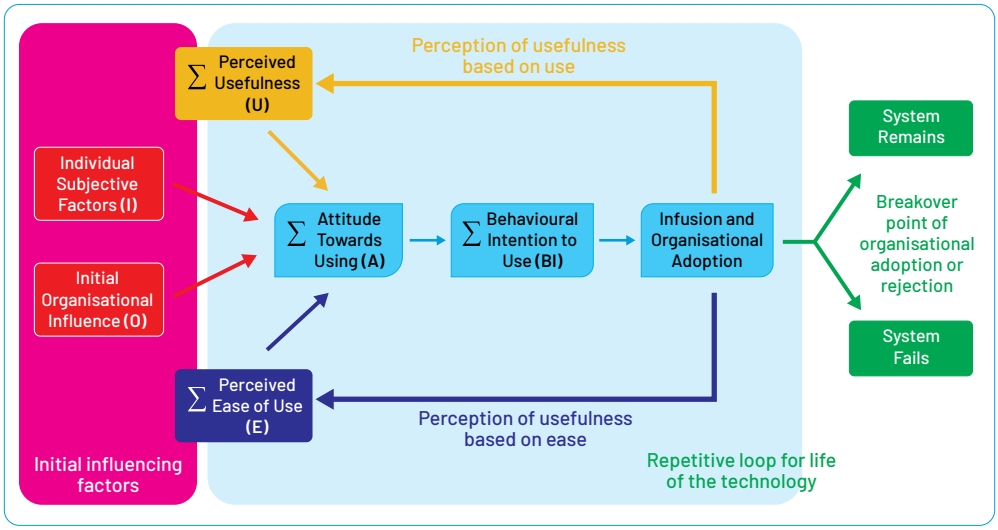

Figure 2.2: Technology Acceptance Model (Davis, 1989)

Despite these weaknesses, TIM makes a valuable contribution to this study by providing insights into individual-level predictors of technology adoption. Its focus on user perceptions is particularly relevant for exploring the effectiveness of e-office system implementation for mail management in public institutions, helping to identify factors that influence acceptance and use among employees.

2.8.3. Conceptual Framework and Its Application

This conceptual framework is developed from the Implementation Effectiveness Model, the Technology Acceptance Model, and the reviewed literature. The two models guided the generation of study variables since only one model could not be sufficient to address all study variables due to the complexity of the study. In the independent variable, the effectiveness of e-office implementation depends upon two key factors: individual factors and organisational capability.

The independent variables include employee's perception and organizational capability. Employee's perception is defined by dimensions such as intention to use, perceived ease of use, perceived usefulness, and attitude toward the system. Research indicates that perceived usefulness and ease of use are significant predictors of system adoption and utilisation (Venkatesh, Thong, & Xu, 2016). Additionally, individual intention to use e-office systems has been associated with improved technology adoption rates in organisations (Al-Gahtani, 2016). Organisational capability, on the other hand, encompasses implementation climate factors such as financial and human resources, infrastructure (e.g., internet connectivity), internal guidelines, training, and technical support. Studies have emphasised that adequate resources and management support are pivotal for successful system implementation, particularly in public institutions (Rana, Dwivedi, & Williams, 2019).

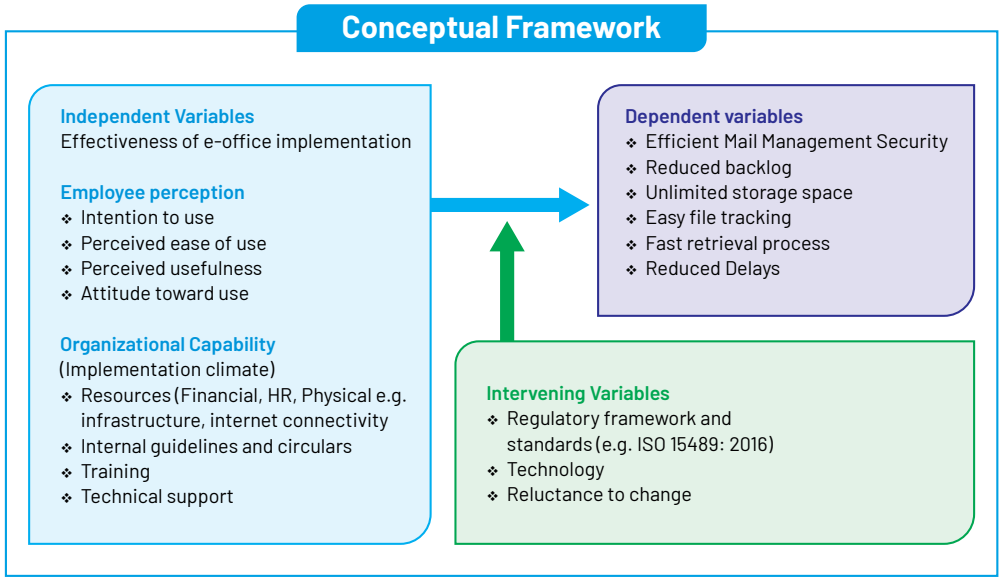

Figure 2.3: Conceptual Framework (Modified from TIM & IEM)

The dependent variable, efficient mail management, encompasses outcomes such as improved mail management security, reduced backlog, unlimited storage space, easy file tracking, faster retrieval processes, and minimised delays. Effective implementation of e-office systems is directly correlated with enhanced efficiency in public service delivery (Komba & Ngulube, 2021).

Intervening variables also play a critical role. Compliance with regulatory frameworks and standards, such as ISO 15489: 2016, ensures structured records management and supports system effectiveness (Kamatula et al., 2021). Additionally, technology infrastructure and compatibility significantly affect the success of implementation efforts (Bwalya, Mnjama, and Sebina, 2018). Resistance to change is another common barrier to technology adoption, which can impede successful implementation (Agyei, Asante, & Abor, 2022).

The conceptual framework assumes that the effectiveness of e-office implementation is heavily reliant on individual perceptions, including intention to use the system and positive attitudes, as well as the belief in its ease of use and usefulness. It also depends on organisational capability, particularly management support and the provision of resources to create an environment that is conducive to implementation. When these factors are available, the system can achieve benefits such as improved mail management security, reduced backlog, and faster retrieval processes. Conversely, the absence of these factors can amplify the influence of intervening variables, such as inadequate technology, regulatory gaps, and resistance to change, which can either facilitate or hinder system adoption and implementation.

This conceptual framework guided the formulation of the study's research objectives and the development of data collection tools, ensuring that all variables, independent, dependent, and intervening, were appropriately addressed.

2.9. Research Gap

The reviewed literature reveals that most studies have focused on Electronic Records Management Systems (ERMS), with limited attention given to e-office systems in public service institutions. Much of the existing research has concentrated on tertiary institutions (Chang'a & Mwilongo, 2022; Masanja & Lwoga, 2021). Additionally, some studies have examined e-readiness for e-governance in Tanzania's Local Government Authorities (LGAs) and Ministries, Departments, and Agencies (MDAs) (Kashaija, 2021; Kamatula, 2019). Other studies have explored the barriers to ERMS implementation (Newa & Mwantimwa, 2019).

Maleko (2022) and Kashaija (2023) explored the e-office system's effectiveness but focused on single institutions, limiting generalizability. Similarly, Makala and Barongo (2024) studied the impact of the e-office system at the National Identification Authority (NIDA), examining short-term effects on employee performance. However, their study did not assess the long-term implications or the broader impact across multiple MDAs.

The methodologies used were case studies, surveys, interviews, and performance metrics, which have provided valuable insights within specific institutional contexts but have not addressed how the e-office system operates across various MDAs. This gap limits the identification of patterns, challenges, and successes that could inform broader national policy and practice.

This study addresses this gap by examining the implementation of the e-office system for mail management across a range of public service institutions, including Ministries, Agencies, Commissions, Universities, and Independent Authorities. By including diverse institutions, the study provides a comprehensive understanding of the adoption, challenges, and the impact of the e-office system, offering insights into its effectiveness in improving mail management in the Tanzanian public service.

2.10. Summary of the Chapter

This chapter has provided an in-depth review of both conceptual and empirical literature on the effectiveness of e-office system implementation for mail management in public institutions in Tanzania, focusing on PO-PSMGG, PC, MCDGWSG, UDOM, eGA, and OSHA as case studies. It began by examining key concepts related to e-office systems, followed by an analysis of previous studies on various aspects, including the achievements of e-office systems in mail management, institutional capacity for implementation, employee perceptions, and challenges faced during the process. Additionally, the review covered studies on e-office implementation

conducted outside Africa, within Africa, and in Tanzania. The chapter also identified research gaps and outlined the theoretical frameworks that guided this study. Based on these insights, the study seeks to serve as a feedback mechanism for system administrators, technical designers, and implementing MDAs, highlighting the achievements and challenges of the e-office system for mail management and providing actionable recommendations for future improvements.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Chapter Overview

This chapter presents the research design, area of study, the study population, sampling techniques and sample size. Furthermore, the chapter describes methods of data collection and research instruments, techniques used to ensure data quality control, ethical issues, data analysis and presentation techniques.

3.2. Research Design

This study used a convergent parallel mixed design throughout to guide the processes of data collection, analysis and presentation of findings. This design was selected because it helps researchers to gain a complete understanding of the phenomenon. Also, as opined by Creswell and Clark (2017), this design is the most efficient for a mixed-methods research approach.

3.3. The Area of Study

This study was conducted at the Headquarters of six public institutions in the Dodoma and Dar es Salaam regions. These institutions were selected because they host key public institutions that serve as models for best practices, which are expected to be adopted by peripheral offices. The Headquarters in these regions are central to evaluating the implementation of the e-office system; thus, successful practices in these institutions are likely to influence other areas. Additionally, accessibility of these regions made the study practical. The findings from these institutions are anticipated to provide valuable insights for the broader adoption of the e-office system in Tanzania's public sector. Relevant information for the study was obtained from the institutions listed in Table 3.1:

Table 3.1: Institutions selected and reason(s) for their inclusion in the study

SN	Institution	Reason for inclusion
1.	President's Office - Public Service Management and Good Governance	It is the Ministry of the Prime Minister and the Cabinet that initiated the establishment and installation of the e-office system in the Tanzanian public service. It is also responsible for the enactment of all legislation and the formulation/ development, implementation, monitoring and review of systems in the country. The study was conducted at the headquarters (HQ) of the institution located in Dodoma.
2.	Planning Commission (PC)	It is a new institution that plays important roles, such as preparing plans, innovations, and the country's economy, hence requiring a high-level e-office to manage its records effectively. The study was conducted at the institution's headquarters in Dodoma.
3.	Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG).	It deals with a special group of people who are the government's priorities, hence requiring stable e-office systems. The study was conducted at the institution's headquarters in Dodoma.
4.	University of Dodoma (UDOM).	It is a large public academic institution serving a large number of people and generating substantial volumes of records, which can be managed more effectively with the aid of e-office. The study was conducted at the headquarters (HQ) of the institution located in Dodoma.
5.	Occupational Safety and the Health Authority (OSHA)	It was established as a Government Agency for regulating occupational safety and health in the Tanzania Mainland. It has the responsibility to ensure that employees work in safer environments, which are free from occupational diseases and accidents, as per laid-down procedures and standards. The agency was selected due to its important role in serving the large population of the Tanzanian government. The study was conducted at the institution's headquarters in Dar es Salaam.
6.	The e-government Authority (eGA)	It was established to strengthen compliance with the Policies, Laws, Regulations, Standards and Guidelines of the Internet Government for Public Institutions. The institution was selected due to its pivotal role in coordinating the implementation of e-government efforts to facilitate the provision of services to the public. The study was conducted at the institution's headquarters in Dodoma.

3.4. Study Population

The study population comprised selected public institutions, namely the President's Office - Public Service Management and Good Governance (PO-PSMGG), the Planning Commission (PC), the Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG), the University of Dodoma (UDOM), the e-Government Authority (eGA), and the Occupational Safety and Health Authority (OSHA). The target group included Action Officers, specifically Heads of Departments and Units, who play a pivotal role in the implementation and oversight of the e-office system. These institutions collectively comprise 113 departments and units, distributed as follows: 16 (14.2%) from PO-PSMGG, 12 (10.6%) from PC, 14 (12.4%) from MCDGWSG, 31 (27.4%) from UDOM, 22 (19.5%) from eGA, and 18 (15.9%) from OSHA. To ensure comprehensive data collection, the study aimed to involve both department heads and their immediate assistants, resulting in an expected population of 226 participants. Their inclusion was considered essential, as they serve as users, creators, custodians, budget allocators, and key decision-makers in records and mail management within the e-office system.

3.5. Sampling Techniques and Sample Size

3.5.1. Sampling Techniques

In this study, purposive and convenience non-probability sampling techniques were used to obtain the sample size from all targeted MDAs in the following manner:

Purposive sampling techniques

This technique was applied purposely to select Heads of Department and Units from all selected MDAs. Additionally, the method was employed to select the Coordinator of ICT Services for PO-PSMGG, including the Director of ICT, the Director of eGA, the Director of ICT from OSHA and HR, the Head of ICT, and the Head of Registry Unit from MCDWGSG. Also, the same method was used to hand-pick Human Resource Officers /Administrative Officers, Heads of Registry (Records Office) units from UDOM. These respondents were reached through an interview method.

Convenience sampling technique

The technique allows respondents to be picked based on their availability. The method was used to get other staff (respondents), including: Records Management personnel; Personal Secretaries; IT Specialists; and some Human Resource Officers /Administrative Officers from all selected MDAs. All respondents reached by this method responded to the questionnaire guide. The method was deemed appropriate for them because they are records practitioners who are daily responsible for duties relevant to the study.

3.5.2. Sample size

From a total study population of 226 individuals, the expected sample size was 128 respondents. However, the study successfully reached 82 respondents, representing a response rate of approximately 64.1%. Of these, 42 participants (51.2%) were engaged through questionnaires, while 40 participants (48.8%) were reached through interviews. All respondents were government employees drawn from the selected institutions, with the following distribution: 12 (14.6%) from the President's Office – Public Service Management and Good Governance (PO-PSMGG), 12 (14.6%) from the Planning Commission (PC), 13 (15.9%) from the Ministry of Community Development, Gender, Women and Special Groups (MCDGWSG), 10 (12.2%) from the e-Government Authority (eGA), 20 (24.4%) from the University of Dodoma (UDOM), and 15 (18.3%) from the Occupational Safety and Health Authority (OSHA).

3.6. Data Collection Methods and Tools

Both primary and secondary data collection methods were employed in this study. During the data collection phase, the questionnaire was the primary research tool used to assess the ground practices in using the e-office system. Other tools used to triangulate the information included interview guides, document review and observation checklists.

3.6.1. Primary Data Collection Methods

(a) Questionnaire

In this study, a structured questionnaire was used as a key data collection tool for all targeted respondents. The questionnaire comprised both closed-ended and open-ended questions, allowing respondents to provide detailed responses, comments, and suggestions where necessary. To ensure accessibility and convenience, the questionnaire was distributed in both hardcopy and softcopy formats. The items included in the questionnaire were directly aligned with the study's objectives to maintain focus and relevance.

To enhance the accuracy and interpretability of the findings, weighted mean analysis based on a Likert scale was employed. This method provided a more refined understanding of respondent perceptions by accounting for the degree of agreement or disagreement, rather than relying solely on frequency counts. The weighted mean approach is recognised for balancing variations in response intensity, mitigating the influence of outliers, and facilitating meaningful comparisons across different items (Miller, 2019; Johnson, 2021). By applying this technique, the study achieved more reliable insights, thus supporting sound interpretation and informed decision-making (Smith & Brown, 2020).

In administering questionnaires, two approaches were used. Firstly, the questionnaire guide was distributed using the "drop-and-collect" approach by the researchers to selected participants, ahead of the face-to-face interview approach because the latter required considerably more personnel, time and financial resources. Secondly, an electronic version of the questionnaire was sent to the email addresses of the identified respondents. As part of close follow-up, several emails were sent to remind those who are not responding on time, requesting them to return the completed questionnaire.

Filled questionnaires were daily returned, checked for completeness, and open-ended responses coded. Data were captured into the Statistical Package for Social Sciences (SPSS) version 25 and cleaned for errors.

(b) Semi-structured Interview

In this study, semi-structured interviews were carried out to reach selected individuals to obtain in-depth information. The information obtained from these interviews was triangulated with the information obtained from the questionnaire and document review.

Semi-structured interviews were administered to Accounting Officers and Heads of Department/ Units responsible for the daily administration and management of office records systems. Respondents were purposively selected due to their positions as a few lead researchers in selected MDAs conducted face-to-face interviews. Items developed for the interview guide were derived from all objectives. The results from semi-structured interviews were thematically analysed.

(c) Observation Checklist

In this study, a non-participatory observation method was used whereby a list of items was developed to assess their presence and application. The observation method helped to triangulate data collected by other methods, and was undertaken by all researchers. Data collected by observation were thematically analysed. Items developed for observation are derived from objectives 1, 2 and 4.

3.6.2. Secondary Data Collection Methods

This method reviewed various published and unpublished materials related to the topic under investigation to assess and identify the existing gaps. This study involved a document review to examine the theoretical and practical aspects of electronic records management and to identify new approaches for implementing e-office systems in Tanzania. Studies were drawn from national, regional and international contexts. Researchers conducted desk reviews and analysis to gather

data that informed the design and implementation of improved electronic office systems, ultimately enhancing public service delivery. Primary document consulted includes: ISO 15489-2016. Information and documentation Records management; Public Service Circular No.2 of the year 2021-Reference No CAC.44/472/01/A/76 Procedure for Official Communication in Government Offices using the Internet (e-office) and e-mail (GMS) systems; Tanzania e-Government Act No. 10 of 2019 enacted by the Parliament of the United Republic of Tanzania; Tanzania e-government general regulations 2020 enacted by Parliament of the United Republic of Tanzania; Tanzania e-Government Guidelines, of 2017 - President's Office, Public Service Management and Good Governance.

Other documents consulted include: Tanzania e-Government Strategy of 2013; Tanzania National Records Management Procedures Manual of 2019. The Tanzania National Records Management Policy of 2011, Tanzania Records and Archives Management Department: Internal Information and Communication Technology Policy of 2019.

Items developed for document review are derived from all objectives. Document review was carried out by all lead researchers. The collected data were thematically analysed to triangulate with data collected through other methods.

3.7. Data Quality Control

To ensure data quality in this study, a combination of data collection methods, questionnaires, interviews, observations, and document reviews was employed. These diverse methods enhanced the comprehensiveness and reliability of the findings. The research instruments were pre-tested on a small sample from public institutions, specifically Tanzania Public Service College, Singida Campus and Tanzania Institute of Accountancy, Singida Campus, to assess their reliability and validity. These institutions were selected for their relevance to the target population and accessibility for the pilot study. By pre-testing at these campuses, the researchers evaluated the clarity and effectiveness of the instruments in capturing the necessary data. This allowed for adjustments to the instruments before conducting the study.

The choice of these institutions for pre-testing also contributed to the generalizability of the study's findings, ensuring the instruments were suitable for similar public institutions. This pre-testing process helped identify and address any issues, maintaining the objectivity and reliability of the final study data. Furthermore, the researchers maintained objectivity throughout the data collection and analysis process, avoiding any manipulation or influence over respondents' answers. These measures ensured the credibility and accuracy of the study.

3.8. Data Analysis

Since the study is hybrid, both quantitative and qualitative data analytical strategies were employed. The qualitative data were analysed using content analysis and logical analysis techniques. In contrast, the quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS) and MS Excel as statistical analysis software. The techniques for quantitative data analysis were the frequency distribution and percentages, which were used to determine the proportion of respondents' choices.

3.9. Ethical Consideration

In carrying out this study, the following ethical considerations were adhered. Respondents participated in this study willingly to ensure that relevant information is obtained. Respondents were informed about the purpose of the study and what it meant to them. They were also assured that they were free to withdraw from the study at any time without any negative consequences to their well-being. Research clearance permits were obtained from all the relevant authorities where data were collected. Respondents were also informed that information obtained from this study would be treated with the highest level of confidentiality by vetted researchers and would be used only for this study. Lastly, all sources consulted were referenced correctly to avoid plagiarism.

3.10. Summary of Chapter Three

This chapter details the research design, target population, sampling techniques, data collection methods, and analysis procedures used to study the effectiveness of e-office system implementation for mail management in Tanzania's public institutions. A descriptive research design is employed, focusing on staff from various departments, including records management personnel, secretaries, IT Officers, and HR Officers, using purposive sampling and convenience sampling. Data were collected through structured questionnaires, interviews and observation, and analysed using quantitative and qualitative methods. Ethical considerations such as confidentiality and informed consent were strictly followed. Potential limitations include sample size and self-reported data reliability, which were addressed through triangulation and transparency. The chapter that follows presents the findings based on the data collected using the methodology described above.

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF FINDINGS

4.1. Introduction

This chapter presents findings from the study which are organized into five key parts; Respondents' rate; Respondents' Demographic Information; Achievements on the Use of e-office for Mail Management; Organizational Capability in Implementing the e-office System for Mail Management; Employees' Perceptions in the Implementation of the e-office System for Mail Management; and Identifying Challenges and Encountered in Implementing the e-office System for Mail Management and Strategies for Improvement.

4.2. The Response Rate

Out of an expected 128 respondents, only 82 (64.1%) participated in the research. All respondents were government employees, including 12 (14.6%) respondents from PO-PSMGG, 12 (14.6%) from PC, 13 (15.9%) from MCDGWSG, 10 (12.2%) from eGA, 20 (24.4%) from UDOM and 15 (18.3%) from OSHA. According to Babbie (2016) and Fincham (2008), a response rate of 50 per cent is considered adequate for analysis, 60 per cent is good, and 70 per cent or higher is excellent. This situational analysis report achieved a reasonable response rate of 64.1 per cent, which is well above the acceptable threshold, ensuring reliability and suitability of data for analysis.

The research engaged a diverse range of senior public (government) employees through interviews. Participants from the selected public organisations included Senior Human Resource Officers and other key personnel such as Heads of Departments and Units. Additionally, Heads of ICT Units from MCDGWSG and OSHA, Directors of ICT from PO-PSMGG and UDOM, and the Principal Planning Officer from the Planning Commission were also interviewed.

Furthermore, records management practitioners involved in day-to-day operations were reached through questionnaires across all surveyed MDAs. These included Records Management Personnel, Personal Secretaries, IT Specialists, and selected Human Resource and Administrative Officers from the targeted institutions.

4.3. Respondents' Demographic Information

To ensure a comprehensive analysis of the study, the demographic characteristics of respondents were examined in four key areas: sex, age, working experience, and education profile, as summarised in Table 4.1.

Table 4.1: Respondents' Demographic Information (n = 42)

Sex			Age Groups (Years)			Working Experience			Highest Education		
Gender	F	%	Age (years)	F	%	Experience (years)	F	%	Education Level	F	%
Male	16	38	20- 30	6	14	Below 1	5	12	Master's Degree	7	17
			31 -40	20	48	1 – 10	19	45	Bachelor's Degree	11	26
Female	26	62	41 -50	12	29	11 – 20	12	29	Diploma	23	55
			51 and above	4	10	21 – 30	4	10	Certificate	1	2
						Above 30	2	5			
Total	**42**	**100**	**Total**	**42**	**100**	**Total**	**42**	**100**	**Total**	**42**	**100**

Source: *Field Research Data 2024*

Gender distribution among respondents indicates that out of 42 participants, 16 (38%) were males and 26 (62%) were females. While not equally distributed, this ratio reflects a good composition of gender as it indicates that the study was representative of both males and females. Other studies indicate that 79 per cent of women participated in the labour force in Tanzania (Yang, 2023). A higher proportion of females than males was reported in fields such as records management and secretarial cadres. In contrast, males outnumbered females in fields like mining, quarrying, and construction, which are typically considered masculine.

In terms of age, the majority of respondents (48%) fell within the 31-40 years age bracket, followed by 29 per cent aged 41-50 years, respondents aged 20-30 years accounted for 14 per cent, while those above 50 years comprised 10 per cent. This distribution suggests that a significant proportion of participants were within the prime working age and likely possesses both experience and adaptability in dealing with technological transitions, such as the implementation of electronic office systems.

In terms of work experience, a considerable number (45%) served between 1–10 years and 29 per cent between 11–20 years. Only 12 per cent had less than one year of experience, while 15 per cent had more than 20 years. This diverse range in tenure enhances the quality of insights, offering perspectives both from seasoned professionals and relatively new staff, potentially reflecting varied levels of openness to change and familiarity with traditional versus modern electronic systems.

Regarding education level, the majority of respondents (55%) held a diploma, followed by 26 per cent with a bachelor's degree and 17 per cent with a master's degree. A small fraction (2%) possessed certificates, and there were no respondents with a PhD, a postgraduate diploma or only a secondary or primary education certificate. This shows a generally strong academic background among respondents, suggesting that they are well-positioned to understand and evaluate the implications

of e-office system implementation. This variable was important as it informed the study about the education level of staff, which, under the context of this study, training is among the aspects that indicate organisational capability for e-office system implementation. The assumption was that if these personnel (staff) are adequately trained, they are likely to implement an effective office system for mail management.

Generally, the demographic data revealed a well-balanced representation in terms of gender, age, experience, and education. The predominance of middle-aged, diploma- or degree-holding professionals with significant work experience provides a robust foundation for assessing perceptions and challenges related to electronic mail management systems. These attributes suggest that participants were equipped with the necessary skills and insights to offer informed evaluations, thereby enhancing the credibility and reliability of the study findings.

4.4. The Achievements on the Use of e-office System for Mail Management in Selected Public Institutions (MDAs)

This section aimed to assess the extent to which the e-office system has contributed to effective mail management within public organisations. The objective was examined through the readiness of e-office systems infrastructures, the implementation status and usage of the e-office system, and the perceived benefits of the e-office system in the studied MDAs.

4.4.1. E-office System Infrastructure Readiness

This sub-section examined the readiness of Tanzanian public organisations in terms of infrastructure to support the implementation of the e-office system for mail management. Key aspects considered include internet accessibility, types of supporting networks, availability of ICT tools, and the facilities used by staff to access the system. The analysis combines quantitative data from 42 respondents with qualitative insights from interviews, aiming to establish the technological preparedness of public institutions for digital transformation. Table 4.2 presents the responses:

Table 4.2: e-Office System Infrastructure Readiness in Studied Public Organisations (n = 42)

Status of Internet Access in the Offices			Networks supporting e-office implementation (Multiple Response)			ICT tools supporting e-office system (Multiple Response)			ICT facilities used to access the Internet for the e-office system (Multiple Response)		
Description	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**
Yes	38	100	LAN	17	40.5	Computers	42	100%	Desktop Computers	34	81
No	0	0	WAN	4	9.5	Scanners	22	52%	Laptops	17	40.5
Do not know	0	0	Wi-Fi	26	61.9	Printers	25	60%	Tablets	4	9.5
			VPN	10	23.8	Others (Specify)	0	0%	Smart phones	1	2.4
			Do not know	1	2.4				Other (specify)	1	2.4
Total	38	100	Other (specify)	0	0						

Source: *Field Research Data 2024*

It can be noted that all respondents (100%) confirmed the availability of internet access in their offices (Table 4.2). This universal connectivity is a foundational requirement for any e-office system, enabling core functionalities such as digital communication, workflow management, and document handling.

The same results were confirmed during the interview, as one respondent from UDOM informed: "*When it comes to internet, we have a very speedy internet; even students in hostels enjoy free internet access*" (Respondent 2). Another from PO-PSMGG added, "*...yes, we have a very stable internet connection…*" (Respondent 3). A respondent from PC also informed, "*…internet is not a problem at all here...*" (Respondent 2)

Regarding the types of internet networks supporting e-office systems, Wi-Fi emerged as the most commonly used (61.9%), followed by LAN (40.5%), VPN (23.8%), and WAN (9.5%). This indicates a hybrid network environment tailored to different organisational needs. Wi-Fi supports mobility and flexible access within offices, while LANs provide stable internal connections.

During the interview, respondents from eGA informed "*….we use LAN, WAN, Wi-Fi and VPN...*" (Respondent 2). Respondents from PO-PSMGG were quoted saying "*…there is a Wi-Fi connection all over this building...*" (Respondent 3) Additionally, another added;

...we use LAN, WAN, Wi-Fi and Virtual Private Network (VPN). VPN usage is generally restricted to a few senior officials in most institutions' usage has significantly accelerated our workflow, particularly for specialised tasks. It allows us to work even when we are outside the office... (Respondent 1)

VPNs offer secure remote access, but, as interview data indicates, are generally limited to senior staff. As Respondent 3 from PO-PSMGG shared:

The presence of networks supporting the e-office system, especially VPN, has significantly accelerated our workflow, particularly for specialised tasks. It allows us to work even when we are outside the office.

Similarly, a respondent from eGA remarked*: "For regular staff, accessing the e-office usually requires being within the office premises connected to our local network. VPN is mostly for Directors and above when they are working remotely*." Additionally, one official from e-GA emphasised, "*All these networks must be connected to the national fibre optic network, which serves as the enabling platform for e-office systems in Tanzania*...." (Respondent 1). A key insight from interviews was the need for seamless integration with the national fibre optic network. This integration is essential for achieving the speed, stability, and security required for e-government platforms (Khan, Jan & Ahmad, 2021; World Bank, 2021).

Regarding the availability of ICT tools, data indicate that all respondents (100%) reported having access to computers. Printers and scanners were also relatively common, available in 60 to 52 per cent of offices, respectively. These tools are crucial for the functioning of e-office systems, enabling document processing, digital filing, and communication. However, no other ICT tools were mentioned, which may suggest a narrow technological toolkit in some organisations.

Findings from the interviews showed varied responses. One of the respondents from the PC stated, "*...when it comes to ICT facilities, we have enough, and they are very modern". We have enough desktops, and almost every employee has a laptop. As you can see, this organisation portrays the image of the nation*" (Respondent 1). Another respondent from the PC added:

"*... we have all the necessary equipment, such as laptops and desktops, to support the e-office system. Power shortage is the only challenge that interferes with the effective implementation of e-office, although it occurs rarely. However, when this problem occurs, a standby generator is used* "(Respondent 2).

Respondent from PO-PSMGG informed "*...surely, we have adequate ICT facilities... we have a scanner capable of scanning 100 pages per minute*... (Respondent 3). Respondent from eGA informed "*... as you know our institution portrays a technological image of the country, therefore we have modern ICT facilities*" ... (Respondent 2). Interviewees from OSHA, PO-PSMGG, eGA, and the PC reported having had adequate

ICT tools and facilities to fully support the e-office system, contributing to its smooth functioning. This was also confirmed via observation.

Other institutions, such as UDOM (specifically Colleges) and MCDGWSG, reported mixed responses regarding the availability of ICT tools and facilities. Some had insufficient (few), others had broken or malfunctioning equipment, some had equipment with limited capacity, and others had outdated versions of the equipment.

One respondent from UDOM shared:

> *…at colleges, ICT facilities are not sufficient, maybe due to limited functions that we perform at the college level … Despite budgetary constraints, we also usually keep broken or malfunctioning ICT equipment for educational purposes, allowing students in ICT courses to use them for practical exercises. Occasionally, these facilities are deemed functional as part of students' maintenance sessions and are then repurposed to support e-office system services. However, they often do not remain operational for long… (Respondent 1).*

A respondent from MCDGWSG reported, "...We have few ICT facilities, as you can see some of the facilities are broken, malfunctioning, and are not modern. Some are dumped here after having been *damaged or stopped functioning*..." (Respondent 1). Researchers also observed this. Another respondent added:

> *...we face budgetary constraints due to multiple priorities within our given budget ceiling. We do not even have a standby generator to support office functions during power outages. However, we are assured of financial support as government revenues permit… (Respondent 2).*

As for the facilities used to access the internet, desktop computers were the most widely used (81%), followed by laptops (40.5%). Tablets (9.5%) and smartphones (2.4%) were used minimally. One respondent indicated using servers, mostly by ICT personnel, for system configuration. The dominance of desktop computers points to a preference for stable, fixed-location access, though it also indicates limited mobility. The low uptake of mobile devices suggests either limited availability or a lack of integration of mobile-friendly solutions.

During the interview, respondent two from the PC remarked, "*…when it comes to ICT facilities, we have enough, and they are very modern. As you can see, this organisation portrays the image of the nation*." Another added, "*…we have all the necessary equipment to support the e-office system…power shortage is the only challenge that rarely interferes with the effective implementation of the e-office system. However, when it happens, a standby generator is used*."

Institutions such as OSHA, PO-PSMGG, eGA, and the PC reported having modern ICT tools and facilities. Conversely, institutions such as UDOM and MCDGWSG reported deficiencies. A respondent from UDOM reported, "*Despite budgetary constraints, we*

also usually keep broken or malfunctioning ICT equipment for educational purposes... occasionally, these facilities are deemed functional... However, they often do not remain operational for long." Another respondent from MCDGWSG said, "*...we face budgetary constraints due to multiple priorities within our given budget ceiling. We do not even have a standby generator to support office functions during power outages...*"

These contrastive observations underscore a disparity in resource distribution and readiness, which can hinder uniformity in the implementation of the e-office system.

Combining quantitative and qualitative findings, it can be established that the studied MDAs are generally well-positioned in terms of internet access and basic ICT tools, networks supporting e-office implementation, and ICT facilities used to access the internet for the e-office system. The findings show that the surveyed institutions have access to internet services, indicating widespread internet availability and a high extent of infrastructural preparedness in Tanzanian public organisations. This is essential for supporting digital governance initiatives. These results align with literature on e-government readiness, where internet access is identified as a critical success factor in digital service delivery (Alanezi, Tarhini, Masa'deh & Alalwan, 2020; Nkohkwo & Islam, 2013).

Additionally, the findings reveal that networks such as LAN, WAN, Wi-Fi, and VPN support e-office implementation in the studied MDAs. Local Area Networks (LANs) are fundamental in office environments, connecting computers within a limited area to facilitate high-speed data transfer and resource sharing. This connectivity enhances communication and collaboration among employees, forming the backbone of e-office operations. Wide Area Networks (WANs) extend this connectivity across broader geographic regions, enabling organisations with multiple locations to operate under a unified network, ensuring seamless communication and centralised management. These findings align with those of Hidayanto, Karnida, and Moerita (2012), who opined that the effective deployment of e-office systems relies on the integration of various network types, each contributing uniquely to functionality and security.

Furthermore, the availability of ICT facilities such as desktop computers, laptops, and tablets is instrumental in e-office implementations by enabling electronic mail management, integrating with digital workflow systems, ensuring mobility, and enhancing security. Computers, scanners, and printers also support the e-office system. Most respondents reported using desktop computers to access the e-office system. This underscores desktops as the primary ICT tools used within public organisations for conducting e-office tasks. This preference may be attributed to their stability, processing power, and suitability for fixed office environments. Heeks (2006) supported this view, noting that desktop computers remain central to the implementation of digital government systems, especially in environments where fixed infrastructure is prioritised over mobility.

Furthermore, the findings indicate that while some institutions generally have adequate ICT facilities to implement an e-office system, others have broken or malfunctioning equipment, equipment with limited capacity, or equipment with outdated versions. Power outages remain a significant challenge, though the availability of standby generators can sometimes mitigate this. Institutions with adequate and modern facilities can fully leverage e-office capabilities, whereas those with resource and infrastructure constraints face interruptions in service delivery and digital transformation. The challenge of inadequate ICT infrastructure was also reported in Burundi and South Sudan (Masanja & Lwoga, 2020).

Effective e-office implementation requires the availability of ICT infrastructure and reliable internet connectivity, as these are crucial for creating an environment that is conducive to digital work. According to the IEM framework, such infrastructural gaps may affect not only the adoption but also the long-term sustainability and effectiveness of technology-based interventions. The integration of both TAM and IEM frameworks into this analysis demonstrates that the perceived usefulness (TAM) and resource availability (IEM) are central to successful e-office implementation.

Despite the weaknesses observed in a few offices, most public offices were characterised by e-office system infrastructure readiness, as they were generally well-positioned in terms of internet access, basic ICT tools supporting networks, and ICT facilities used to access the internet for e-office system, aligning with the requirements of the theoretical frameworks.

4.4.2. E-office System Implementation Status and Usage

This section presents findings on the implementation status, usage frequency, effectiveness, and types of records managed through the e-office system for mail management across selected Tanzanian public institutions. The section presents data from qualitative insights gathered through interviews, providing a comprehensive view of how the system is integrated and utilised within these institutions. The data are interpreted through theoretical lenses, notably IEM and TAM, to assess both the operational realities and underlying behavioural factors influencing system adoption.

Respondents were asked to indicate their organisation's implementation status, usage frequency, system effectiveness, and record types. Findings are summarised in Table 4.3.

Table 4.3: e-Office System Implementation and Usage in Studied Public Organisations (n = 42)

Level of e-Office Implementation			Frequency of use of the e-office system for mail management			Effectiveness of the e-office system for mail management			Types of records managed by using the e-office system (multiple response)		
Description	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**
Fully implemented	42	100	Often	11	26	Very effective	30	73	Restricted Open	30	71
Still in configuration/ installation stage	0	0	Always	29	69	Somewhat effective	10	24	Confidential	24	57
Not yet implemented at all	0	0	Sometimes	2	5	Neutral	1	2	Secret	2	5
Do not know	0	0	Rarely	0	0	Very ineffective	0	0	Top Secret	0	0
			Never	0	0	Somewhat ineffective	0	0	Others (specify)	1	2
Total	**42**	**100**	**Total**	**42**	**100**	**Total**	**41**	**100**			

Source: *Field Research Data 2024*

The results in Table 4.3 indicate that the e-office system for mail management is implemented across the selected organisations, with 100 per cent of the respondents confirming its adoption. One of the respondents during the interview from eGA, noted "*...Yes, many public institutions implement the e-office system. Currently, 338 Ministries, Departments, and Agencies (MDAs) use the e-office system for mail management as they remain connected to the National Fibre Optic Backbone ...*" (Respondent 1). This was also confirmed during the interview at PO-PSMGG as one respondent informed, "*here at PO-PSM, we fully implement e-office... we started using e office 1st July 2017"* (Respondent 1). Similarly, a respondent from MCDGWSG informed "*e office is fully implemented here"* (Respondent 3).

There were no respondents who indicated that the system is still in the configuration or installation stage, not yet implemented, or unknown. This information suggests that the selected public service institutions have successfully transitioned to the e-office system for mail management. However, at UDOM, specific disparities were identified, particularly at the College level, where the e-office system is fully implemented at the central administration but partially implemented in colleges. Respondent 3 from UDOM was quoted saying;

> *… Here at UDOM, we have two levels of administrative structure: Central Administration and the Seven Colleges. The Central Administration Office oversees the entire university, while the seven Colleges, each managed by a designated leader, are responsible for all administrative operations within the college, which in turn, report to the Central Administration Office. Currently, the e-Office system has been fully implemented (100%) at the Central Administration Office. However, its implementation across the colleges remains incomplete* (Respondent 1).

Another Respondent from UDOM added:

> *…mhhh., I think the centralised administration model was implemented to maintain confidentiality due to the size of the institution. All decisions are made at the central administration level and subsequently communicated to the colleges…* (Respondent 3).

Study findings indicate that although the selected organisations have implemented e-office for mail management, disparities in complete implementation were noted, where centralisation, limited functionality and limited autonomy have been observed, particularly at UDOM colleges. This is to say, disparities in the system usage show a lack of functional integration. According to Fixsen et al. (2005), successfully technology implementation depends not only on deployment but also on integration into user's daily tasks across all levels, something that is lacking at UDOM colleges where users recognise the usefulness of the system but are limited by their inability to act on tasks independently as it was informed by one respondent: *"…we have accepted e-office system with all our hearts, the issue is we lack full autonomy because our roles within the system are minimal, we just receive, record, scan and send to central administration who has full autonomy and does all the remaining tasks.."(*Respondent 2, UDOM*).*

Interview feedback from eGA supports the study results in terms of national deployment, where one official said: "…*Yes, many public institutions implement the e-office system. Currently, 338 Ministries, MDAs use e-office system for mail management as they remain connected to the National Fibre Optic Backbone*..." (Respondent 1, eGA).

This national rollout indicates strong infrastructural support, but the variations in institutional autonomy suggest that true digital transformation depends on contextual adaptations. According to TAM (Venkatesh & Davis, 2000), user perception of usefulness and ease of use are key determinants of system acceptance. In a case like UDOM, restricted autonomy affects perceived ease of use, as users feel disempowered despite recognising the system's potential benefits.

Regarding system usage frequency, the study found that 69 per cent of the respondents reported having "always" been using the e-office system, and 26 per cent reported having been using it "often," indicating robust operational integration. There were

no reports of infrequent use, pointing to a high level of institutional dependence on the system. Interview data reaffirmed this as Respondent 2 from MCDGWSG was quoted saying: "*…here we use e-office all the time because the Permanent Secretary is the frontier and he does not want papers at all*". A respondent from PO-PSMGG also reported "*we use the e-office system always" (*Respondent 2, PO-PSMGG). Another respondent added '*...we were among the first institutions to use the e-office system, since earlier versions up to this version 5, and we have always used it" (*Respondent 3, PO-PSMGG). A study by Abdallah and Kopoka (2024) also confirmed daily usage of the e-office system by 58per cent at the PO-PSMGG.

Others mentioned the fallback to physical files during technical downtimes: "*…we often use e-office and sometimes when e-office is down we go back to physical files*…" (Respondent 2). One respondent from eGA remarked: "*…for security concerns and unreliable electricity to support electronic systems, we need to continue using both systems in parallel. As a developing nation, we still have a long way to go...".* Similarly, Respondent 1 from the PC stated: "*…It is important to use both systems, i.e., paper records and the e-office system, particularly when processing payments, as accountants often need to verify signatures on hard copies*..." (Respondent 1).

Regarding the effectiveness of the e-office system, 73.2 per cent of respondents rated it as "Very effective," and 24.4 per cent as "Somewhat effective." No respondents considered the system ineffective. This strong endorsement suggests that the system significantly enhances the management of institutional correspondence. However, interviews uncovered that some respondents who rated the system as "Somewhat effective" had limited engagement with it due to role constraints.

Interview responses on the same aspect were as follows: Respondent 1 from PO-PSMGG noted,

> *…The system is excellent and has significantly improved the handling of files and enhanced timely service delivery to clients. Additionally, electronic files do not pile up like paper records used to..." (*Respondent 1).

Another respondent stated:

> *"…The current e-office system (version 5) has addressed issues such as electronic files not being seen by Action Officers after closing, you can request it electronically from the registry staff, and duplicate letter entries caused by reliance on reference numbers without headings, copied to Action Officers etc... It also enables transferring letters filed incorrectly, retaining a folio number for tracking, similar to paper records..."* (Respondent 2, PO-PSMGG).

Respondent 01 from MCDGWSG emphasised, "*…e-office system is effective because it helps monitor weekly incoming and outgoing mails. The system also tracks who has a document and identifies whether an action has been taken on it*…." Another respondent also added... "*e-office system is perfect, there are no issues of closing files because an e-file never gets full*…" (Respondent 3).

Respondent 01 from OSHA pointed out how the e-office system has resolved delays caused by Action Officers who previously held onto files for extended periods. The respondent explained:

> *...with this system, issues where Action Officers delayed processing files and blamed the registry staff for not delivering physical files have been solved, as the system allows tracking of where a document is stuck and who has failed to process it promptly....* (Respondent 01).

Respondent 02 from the Finance Department at OSHA highlighted:

> *... e-office system has reduced complaints about delayed payments by improving transparency. Previously, claimants misunderstood the process, assuming payments were approved once submitted to the Accounting Officer, unaware of reviews required by Assistant Action Officers. Now, the system allows claimants to track where their payment is stalled, ensuring transparency and accountability...* (Respondent 02).

The findings further showed that the office system is predominantly used for handling restricted open records (71%), followed by confidential records (57%). During the interview, one respondent from eGA informed, "*Currently, the e office system manages open records (Respondent 1). Another respondent from PO-PSMGG informed, "Due to security concerns, only open records enter the e office; if you find secret or top secret, they are downgraded"* (Respondent 1).

Both quantitative and qualitative data confirm that e-office has been fully implemented in most studied public institutions, except in UDOM, specifically at the colleges. The study confirms that e-office systems for mail management have been technically rolled out across all the surveyed Tanzanian public institutions, achieving a 100per cent implementation rate. However, effective usage varies by roles and administrative levels. In institutions such as UDOM, centralised control hampers college-level autonomy, reducing the system's responsiveness and perceived ease of use. Despite the weaknesses identified at UDOM, the findings indicate that e-office was used frequently for managing mails, leading to improved service delivery. Additionally, the findings show that the system was effective in managing mails, with restricted, open, and confidential mails mostly handled within the e-office system across the studied MDAs. This highlights the positive impact of e-office systems on organisational operations.

Similar findings were reported by Ladislas and Mbabazi (2020), who indicated that e-office is fully implemented in Europe and Asia. Romwald and Mwantimwa (2020) reported similar findings in Egypt, Morocco, Rwanda, Kenya, Uganda, and Tanzania. In Tanzania, e-office is fully implemented in the ministries (Kashaija, 2023), authorities (Makala & Barongo, 2024), and financial institutions (Kisinja, 2021). However, these findings differ from those in a study by Masanja and Lwoga (2020),

who found that Burundi and South Sudan are still struggling to fully implement e-office systems due to the absence of a regulatory framework and inadequate ICT infrastructure.

According to the TAM, the implementation of E-Systems depends on perceived usefulness and perceived ease of use. This suggests that institutions such as UDOM should focus not only on surface-level implementation (fidelity) but also on the depth of operational embedding across hierarchical layers. Such institutions may need to tailor the system to allow for workflow transparency, feedback loops, and decision-making capabilities at the college level.

Therefore, the e-office system in most public institutions is considered fully implemented for mail management, as the studied MDAs demonstrated a high level of system use. The system's effectiveness and frequent usage contributed to improved mail management and organisational efficiency.

4.4.3. Perceived Benefits of the E-office System

This aspect focused on the benefits derived from using the e-office system for mail management in organisations. To be more focused, the weighted mean as per the Likert Scale was calculated to enhance the interpretation of results. The weighted mean provides a precise interpretation of Likert scale responses by considering the intensity of agreement or disagreement, offering a nuanced view beyond simple frequencies. Findings from multiple responses are presented in Table 4.4.

Table 4.4: Benefits achieved from the use of e-office system for mail management in organisations (n = 42)

SN	Description of item	Level of Extent					Likert Scale Interpretation	
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Weighted mean	Interpretation
1	Reduced backlog	15	25	0	0	0	4.4	Agree
2	Reduced storage space	15	23	0	0	0	4.4	Agree
3	Easy file tracking and reduced misplacement/loss of files	23	17	0	1	1	4.5	Strongly Agree
4	Increased fast retrieval process	22	19	0	0	0	4.5	Strongly Agree
5	Reduce paperwork and maintenance of physical files	17	22	0	0	0	4.4	Agree
6	Minimised records office (registry) running costs	12	24	0	1	0	4.3	Agree
7	Prevent loss of files and reduce opening of records' temporary files	19	18	0	1	1	4.4	Agree
8	Improved accountability	18	22	0	0	1	4.4	Agree
9	Improved decision-making processes	15	24	0	1	0	4.3	Agree
10	Improved transparency	18	20	0	3	0	4.3	Agree
11	Improved quality of service delivery	22	18	0	1	0	4.5	Strongly Agree
12	Reduced customer complaints	11	24	0	2	0	4.2	Agree
13	Increased security and confidentiality of records and files	16	22	0	1	0	4.4	Agree
14	Reduced delay of records to/from Action Officers	17	23	0	0	0	4.4	Agree
15	Increased work morale for Records Staff and other employees dealing with records in daily activities	16	25	0	0	0	4.4	Agree
16	Allows integration/data exchange with other institutions	**16**	**19**	**0**	**3**	**1**	**4.1**	Agree

Source: *Field Research Data 2024*

From the quantitative data collected (n=42), weighted mean scores for all 16 assessed benefits exceeded the value of 4.0, indicating a strong agreement among respondents about the positive contributions of the e-office system. Specifically, the system was

perceived to have reduced backlog (M=4.4), physical storage space (M=4.4), and paperwork (M=4.4), while enhancing file tracking and reducing misplacement (M=4.5), speeding up retrieval (M=4.5), and improving the overall quality of service delivery (M=4.5). Additional benefits included improved accountability (M=4.4), better decision-making (M=4.3), increased security and confidentiality (M=4.4), and improved staff morale (M=4.4). Even the items that scored relatively lower—such as enabling integration with other institutions (M=4.1) and reducing customer complaints (M=4.2)—still reflected a generally high level of agreement on the system's usefulness.

The interview data also substantiate these findings. Respondent 1 from PO-PSMGG stressed the system's capacity to enhance document security and prevent unauthorised access, stating, "…with an e-office, it is difficult for someone to remove documents without authorisation*, as the system requires the signature of the responsible officer…"*. Another respondent added, "An e-file *never gets full because an e-office provides unlimited storage space*" (Respondent 2). Similarly, Respondent 1 from UDOM emphasised efficiency, highlighting, *"In the past, we used to carry files from one place to another physically, but now everything is done within the system, and it is much faster…"* These voices from the field illustrate how an e-office system has minimised human errors, eliminated the risk of lost files, and improved workflow speed addressing long-standing challenges in records management.

Combining qualitative and quantitative findings, it can be established that the implementation of an e-office system in public institutions has led to significant achievements, including enhanced efficiency, better accountability, and increased transparency in mail and document management. The e-office system automates processes such as document routing and approval workflows, enabling real-time tracking, minimising file misplacement, and improving overall information accessibility. Furthermore, the integration of metadata, tagging, and indexing functions in the e-office system has improved file organisation and retrieval, enabling staff to locate records swiftly and reliably. Other reported benefits from respondents include the ability to track and follow up on mail movements, eliminate handwritten notes that were often difficult to read, and maintain unlimited storage capacity, issues commonly cited as problematic under manual systems.

This is supported by several scholars who have similarly observed that the move from paper-based to digital records has consistently been shown to reduce inefficiencies, enhance transparency, and increase service delivery speed (World Bank, 2016; UNESCO, 2023). As observed by Tadesse and Mulubrhan (2017), public organisations in Ethiopia experienced improved mail handling and faster document retrieval with the adoption of e-office systems, thereby enhancing overall operational efficiency. Likewise, other scholars (i.e., Kavaliauskas & Kunciene, 2020; Bwalya, Mwiya, and Chipili, 2019; Ahmed & Iqbal, 2020) found that e-office systems

were highly regarded for their effectiveness, particularly in improving mail handling, document management, and administrative task efficiency, while also enhancing data security.

According to IEM, if the system is effectively used, it yields results. Respondents overwhelmingly found the system beneficial to their daily operations, leading to positive attitudes and increased system usage. This, therefore, implies that the adoption of the e-office system for mail management in Tanzanian public institutions has yielded substantial benefits, including improved operational efficiency, enhanced accountability, reduced physical storage needs, and making document handling faster and more secure.

4.5. Organisational Capability in Implementing E-office System for Mail Management

This section explores the organizational capability of public institutions in Tanzania to effectively implement the e-office system for mail management, focusing on four key areas, users' experience and competence in operating the system; training and capacity-building initiatives; organizational readiness and the level of institutional support; and measures taken by organizations to strengthen an e-office system deployment and ensure sustainable use. These themes are analysed through the lens of the IEM and TAM, which highlight the critical roles of user readiness, training, organisational support, and resource availability in driving effective technology adoption in the public sector.

4.5.1. E-office System Usage Experience and Competence in Operating it

The successful implementation and utilisation of the e-office system are closely tied to users' experience and their competence in operating the system. This subsection examines the duration of employees' engagement with the e-office system for mail management and their self-assessed proficiency in using it. Understanding both the length of usage and the confidence levels of users provides valuable insight into the system's operational maturity and the capacity of personnel to leverage its functionalities effectively. Table 4.5 summarises the findings on users' experience and competence across the studied organisations.

Table 4.5: E-office System Usage Experience and Competence in Operating the System (n=42)

Duration of using the e-office system			User proficiency in operating the system		
Description	**F**	**%**	**Description**	**F**	**%**
1 - 6 months	10	24%	Very well	23	55
7 - 12 months	4	10%	Well	18	43
1 - 2 years	9	21%	Somehow	1	2
3 - 5 years	16	38%	Do not know how to operate it	0	0
More than 5 years	3	7%			
Total	**42**	**100%**	**Total**	**42**	**100**

Source: *Field Research Data 2024*

Data in Table 4.5 indicate that the majority (38%) of the respondents reported having been using the e-office system for 3–5 years, suggesting substantial experience with the system across institutions. Additionally, 24 per cent reported using it for 1–6 months, while 21 per cent reported using it for 1–2 years, indicating a mix of both new and experienced users. Interviews supported this pattern, with one respondent from PO-PSMGG stating, *"Most public organisations researched have been using an e-office system for mail management for over three years, with the implementation dating back to 2017"* (Respondent 3).

In terms of user competence, 55 per cent of the respondents reported having operated the system "very well," and another 43 per cent reported operating it "well." Only 2 per cent indicated that they "somehow" knew how to use it, and none reported being unable to operate the system. This reflects a high level of proficiency among users, which aligns with the relatively long duration of use reported by most respondents. Responses from the interview further point out a high level of user comfort and competence in using the e-office system. They indicated that the system has become an integral part of day-to-day operations. Users, regardless of their background, have been able to navigate and apply the system effectively. This is further illustrated by a comment from one OSHA staff member who shared:

> *…Honestly, in all my years of service, I have come across many systems, but the e-office system stands out as exceptionally simple. Even for someone like me, who never had the chance to learn computer skills in school (born before computers), it took me only a short time to learn and understand it. I continue to enjoy using it—it is an excellent system… (*Respondent 3).

Such voices reveal that the system is accessible and user-friendly even to those with minimal digital literacy.

Both the quantitative and qualitative responses point to strong experience and competence in using the e-office system among public servants. Most users have operated the system for over three years and report high proficiency, supported by interview insights confirming that the system is widely used, easy to learn, and integrated into daily operations, even for those with limited prior digital skills. This reflects not only effective system adoption but also its user-friendliness and accessibility across varying levels of digital literacy.

The findings above align with findings in previous studies (i.e., Mtega & Msungu, 2021), who revealed that digital system success in Tanzanian public institutions is closely linked to user-friendly design and accessible training. Satish and Rizwana (2023) similarly emphasised that in the Indian public sector, effective training and intuitive systems significantly enhance user adoption and competence. These studies validate the current study's insights that usability, combined with supportive implementation strategies, promotes long-term system acceptance.

From the study findings, it can be established that the successful adoption and use of the e-office system in public institutions is primarily driven by its perceived ease of use, high user competence, and supportive institutional environments. Drawing from the Technology Acceptance Model and the Implementation Effectiveness Model, the findings underscore that system simplicity, consistent training, and organisational support are critical for sustained digital transformation. Public institutions have demonstrated strong internal capacity for managing digital mail, highlighting the importance of prioritising user-friendly design, skills development, and policy support in implementing public digital systems.

4.5.2. Training and Capacity Building on the Implementation of the e-Office System for Mail Management

This subsection assesses the extent to which users of the e-office system in selected Tanzanian public institutions have received the types of training offered, perceived relevance of that training to mail management, and the alternative methods adopted by untrained users to acquire necessary skills. Responses are summarised in Table 4.6.

Table 4.6: Training and Capacity Building on the Implementation of the e-Office System for Mail Management

Attendance of training			Types of training attended			Relevance of training to mail management			Alternative ways of learning		
Description	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**
Yes	24	57	Workshop and seminar attended	11	30	Yes	23	96	Learned from peers	15	65
No	18	43	Short course attended	8	22	No	1	4	Own initiatives	8	35
			In-house training	18	49	Not sure	0	0	Others	0	0
			Others	0	0						
Total	42	100	Total	37	100	Total	24	100	Total	23	100

Source: *Field Research Data 2024*

Findings from Table 4.6 indicate that the majority, 24 (57%) of the respondents reported having attended formal training on the system, while 18 (43%) had not. During the interview, Respondent 3 from PC remarked, "I have attended several e-office *system trainings and short courses."* Similarly, respondents from PO-PSMGG and UDOM reported, " *We attended an e-office training organised by RAMD and eGA*. Similarly, Respondent 1 from OSHA informed, "*eGA and RAMD came to train us on the use of the e-office system. While the RAMD team focused on explaining administrative guidelines, eGA provided practical system training."* This was also reflected by Respondent 2 from PO-PSMGG, who said, "*...yes, we attended the e-office system training, but mostly features we learnt on our own as we were continuing using the system".*

Respondents who had attended training were allowed to select multiple types. In-house training emerged as the most common form (49%), followed by workshops and seminars (30%), and short courses (22%). The preference for in-house training reflects the tendency of public institutions to adopt cost-effective, context-specific capacity-building methods tailored to their internal operations. One respondent from PC reported, "... *I attended several trainings in Tanzania and abroad, specifically in South Africa and Dubai."* These experiences not only enhanced individual capacity but also introduced new perspectives on system use and improvement.

At UDOM, IT specialists took the lead in training staff internally, underscoring the institution's commitment to developing internal technical capacity. In other institutions, such as MCDGWSG, a "train-the-trainer" model was used as one respondent informed ",we were taught by our fellows who went for an e-office system training*, at first the ITs attended training and then came to teach us" (*Respondent 2).

Respondent 3 added, *"We rely on colleagues who attended training to teach us, but sometimes this training is not effective… it would be better if Records Officers were trained directly by experts."*

While at the MCDGWSG, it was also observed that some new employees were receiving in-house training from the IT specialists on the e-system. While peer-led and IT-facilitated training appeared practical and resource-efficient, several limitations were observed. Respondent 3 from UDOM raised a concern:

> *"Our unit is rarely involved in training. Most of the time, it is the Head of Administration or HR who goes. When they come back, they cannot explain to us correctly how the system should be used for actual records management functions since they lack some records management touches that we deal with daily as records management experts"* (Respondent 7).

A similar concern was expressed by Respondent 4 from PO-PSMGG: *"The IT people were trained first, but since they are not directly dealing with Records Office and the whole process of managing records, once we face challenges related to registry functionalities within the system, we end up trying to figure it out by trial and error."*

These voices point to a significant misalignment between training recipients and those who perform core records functions, limiting training effectiveness and hindering optimal use of the e-office system.

Generally, respondents had acquired skills both formally and informally, either through peer assistance or self-directed learning. These findings highlight the critical need to scale up formal training opportunities to ensure that all users develop the competencies required for effective and standardised use of the e-office system.

Regarding the relevance of training on the use of the e-office system for mail management, of the 24 respondents who attended formal training, 23 (96%) affirmed its relevance to mail management functions in their institutions. Only one respondent (4%) found the training irrelevant, which suggests that when well-targeted, the training addresses real user needs and supports effective system application.

Interview responses reinforced this view. Respondent 3 from PO-PSMGG noted;

> *"The training provided some insights, but the system had many shortcomings. We identified several issues and shared them with RAMD and e-GA, who later addressed them in version 5"* (Respondent 5).

However, some institutions felt that early training efforts missed key stakeholders. Respondent 2 from MCDGWSG emphasised:

> *… the training lacked direct input from records professionals, who play a key role in the e-office system. Involving end-users from the beginning would have*

improved relevance and effectiveness…". Respondent 1 from UDOM informed "… the training provided did not reflect our organisational structure ….(Respondent 1).

These responses highlight the need for more role-sensitive training programs, co-designed with end-users and tailored to institutional contexts.

Among the 18 users (43%) who did not attend formal training, most developed their competencies informally through alternative learning methods. Fifteen respondents (65%) learned through peer support, while eight (35%) relied on self-initiated efforts. This underscores the importance of informal learning pathways, especially where formal programs are unavailable or inaccessible. To harness this dynamic, organisations should consider institutionalising peer mentoring programs, creating self-paced digital learning modules, and ensuring the availability of user manuals and visual aids. This would support knowledge transfer, reduce dependency on a few trained individuals, and standardise system use across departments.

Combining quantitative and qualitative findings, a comprehensive understanding of training and capacity building on the implementation of the e-office system for mail management can be established. Quantitative data revealed that the majority received formal training, which was primarily seen as relevant and beneficial. At the same time, qualitative insights highlight disparities in training access, content relevance, and alignment with user roles. Together, the findings underscore the need for inclusive, role-specific, and contextually tailored training approaches, while also recognising the value of informal learning in bridging the existing gaps.

These findings align with findings of previous studies; for example, Abdallah (2023) underscores the central role of in-house training in an e-office adoption, while Bwalya, Mnjama, and Sebina (2018) highlight the importance of organisational readiness and end-user training in successful e-governance. Similarly, Aliyu and Yusuf (2019) emphasise that capacity building, supported by adequate ICT infrastructure, is essential for digital system integration. From a theoretical standpoint, the IEM emphasises the importance of user engagement and role-appropriate training for sustained system use. Additionally, the TAM supports the observation that training affects perceived usefulness and ease of use, both of which are key determinants of technology adoption.

The study reveals that while a significant number of users have received training, primarily in-house, the current training ecosystem faces key challenges, including the exclusion of core records staff, inconsistencies in knowledge transfer, and misalignment of training content with organisational structures. Nonetheless, informal learning through peer support and self-initiative has played a complementary role in building user competence. Balancing technical knowledge with functional system application will be essential in enhancing institutional

capacity, improving system use, and ensuring a sustainable digital transformation in the public sector.

4.5.3. Organisational Readiness and Support for the Implementation of the e-office System for Mail Management

This section examines the overall preparedness of organisations in implementing the e-office system. It explores the availability of ICT facilities that support system implementation, frequency of use among staff and how effectively the system is performing in selected institutions. Furthermore, the section highlights the types of records managed through the system and outlines key benefits realised by organisations following its adoption. Together, these components provide a comprehensive view of how the e-office system contributes to improving efficiency, transparency, and digital transformation in public sector mail management. Table 4.7 presents a summary of findings:

Table 4.7: Organisational Preparedness and Support Mechanisms for Effective e-Office System Implementation (n = 42)

Organisational readiness for e-office adoption			Presence of Awareness programmes for the implementation of e-office system			Additional efforts to enforce implementation of e-office system (multiple response)		
Description	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**
Highly ready	29	71	Extremely effective	9	21	Legal tools (laws and policy) to capture the effective implementation of e-office	19	45
Moderately ready	12	29	Effective	31	74	Internal guidelines and circulars/memo	23	55
Not ready	0	0	Ineffective	2	5	Enhanced security on emails incorporated in the e-office system	21	50
Do not know	0	0	Extremely ineffective	0	0	Others (specify)	0	0
Total	**41**	**100**	**Total**	**42**	**100**			

Source: *Field Research Data 2024*

Findings from Table 4.7 indicate a generally high level of organisational readiness and support for implementing an e-office system for mail management in the public sector. The majority of respondents (71%) described their institutions as highly ready, while the remaining 29 per cent rated them as moderately ready. Notably, no respondents reported their organisations as unprepared or uncertain, reflecting a strong institutional commitment to digital transformation. Interview responses supported this, with several participants emphasising the active role their organisations were playing in promoting the e-office adoption. For instance,

Respondent 3 from eGA noted, *"... generally, e-GA demonstrates a high level of organizational readiness and support for implementing the e-office system for mail management within the public sector by providing guidelines, systems development support and training..."*. Also, Respondent 1 from MCDGWSG reported, "*The Permanent Secretary always promotes and emphasize the use of e office almost in every staff meeting*" ...

Regarding awareness programs, 74 per cent of the respondents found the programs effective, 21 per cent rated them as highly effective, and only 5 per cent reported them as ineffective. These findings were reinforced by participants' feedback during the interviews. For instance, Respondent 1 from OSHA stated, "*...they (programs) keep us updated with any changes made in the system and address threats whenever they appear*..." This illustrates how awareness efforts have gone beyond basic training to include timely communication on system changes and digital threats, thereby strengthening both knowledge and trust among users.

In terms of implementation support mechanisms, 55 per cent of the respondents cited internal guidelines, circulars, and memos, 45 per cent mentioned legal frameworks, and 50 per cent referred to embedded security features within the system as implementation support mechanisms. However, an important gap was identified: while public service guidelines support paper-based records, there is a lack of comprehensive policy instruments for managing electronic records. As Respondent 1 from the PC provided additional insight, by explaining:

> *...Actually, the guidelines we have are those related to internal directives within our institution (internal memos and circulars), as well as general public service policies and guidelines that primarily address paper records. We are still lacking comprehensive guidelines for electronic records management systems, similar to those for paper records. (Respondent 15).*

The observational data confirmed a coordinated approach to information security through the integration of physical and digital controls. The research team observed secured registry rooms accessible only to authorised staff, private offices for Heads of Department to ensure confidentiality, and various internal circulars and memos guiding the use of an e-office system. These physical security measures complemented the digital safeguards embedded in the system, reflecting synchronisation that aligns with best practices for secure information systems. This concurs with the study's conceptual framework, which underscores the importance of a multi-faceted approach encompassing technical, organisational, and human factors for successful e-office implementation.

Both quantitative and qualitative findings revealed a strong level of organisational readiness and institutional commitment to the implementation of an e-office system in the public sector. Most institutions are not only strategically prepared but are also actively supporting the transition through awareness programs, internal guidelines,

legal frameworks, and security features. However, despite these strengths, both data sets point to a critical shortfall regarding the lack of comprehensive policies tailored explicitly for electronic records management, which could hinder long-term success if not addressed.

These findings are in line with insights from the existing literature that identify leadership commitment, institutional culture, and resource availability as critical factors in influencing organisational readiness for digital transformation (Alhassan, Sammon, & Daly, 2019; Mutuku & Oyier, 2021). The perception of readiness aligns with Vial's (2021) conceptualisation of digital transformation as a capability-building exercise that is deeply embedded in institutional processes. Additionally, the effectiveness of awareness programs in enhancing user trust and engagement reflects the broader understanding that the ongoing communication and capacity-building initiatives are essential for successful system adoption (Dwivedi, Rana, Tamilmani, Sharma, & Weerakkody, 2023; Hosseini, Maguire, & Starkey, 2022). However, as Heeks (2018) cautions, high levels of perceived readiness do not guarantee implementation success if practical barriers such as the lack of clarity in policy or inadequate guidelines for electronic records are not addressed.

The limited development of comprehensive electronic records management guidelines echoes this warning and highlights an area requiring urgent attention. Furthermore, the integration of physical and digital security mechanisms aligns with best practices in information governance, such as those outlined in ISO/IEC 27001:2022, which advocate for a multi-faceted approach combining human, technical, and organisational safeguards. The concentration on formal internal protocols, legal tools, and digital safeguards observed in this study reflects a maturing environment for e-office implementation. However, sustainability will depend on continuous investment in infrastructure, change of management, and policy refinement (Tangi, Wamuyu, & Okello, 2023).

Therefore, the findings on organisational readiness and support for implementing the e-office system for mail management show that Tanzanian public institutions have a strong foundation for digital transformation. Most respondents reported moderate to high readiness, supported by effective awareness programs, internal guidelines, legal frameworks, and embedded security features. However, a lack of comprehensive electronic records management policies remains a key barrier. Therefore, while the environment is favourable for e-office adoption, sustained success depends on further policy development, capacity building, and strategic investment.

4.5.4. Measures Taken to Enhance E-Office System Implementation for Mail Management in Organisations

The other aspect in this subsection explored the adequacy of various measures taken to support the implementation of the e-office system for mail management in public institutions in Tanzania. The findings are categorised and summarised as follows (*Likert scale: answer: 1 =Very Adequate, 2 = Adequate, 3 = Inadequate, 4 = Very inadequate*):

Table 4.8: Measures taken to enhance e-office system implementation for mail management in organisations (n = 42)

Sn	Category	Extent				Likert Scale Interpretation	
		1	2	3	4	Weighted mean	Interpretation
1	Availability of financial resources	8	32	1	0	1.83	Adequate
2	Availability of records professionals and skilled staff	19	20	2	1	1.64	Adequate
3	Availability of ICT infrastructures	14	25	1	1	1.73	Adequate
4	Availability of security measures	18	19	2	0	1.59	Adequate
5	Availability of national policies and guidelines	23	13	3	0	1.49	Very Adequate
6	Availability of internal guidelines and circulars	17	21	1	0	1.59	Adequate
7	Training on e-office system and basic ICT skills	14	21	5	1	1.83	Adequate
8	Adequacy of technical support	13	25	2	0	1.73	Adequate
9	Integration / data exchange of e-office system for mail management with other institutions	14	17	5	2	1.87	Adequate
10	Others (Please specify)	0	0	0	0		
	Overall	**14**	**20**	**2.5**	**0.9**	**1.74**	**Adequate**

Source: *Field Research Data 2024*

Findings revealed that most institutions rated key enablers as "Adequate." Notably, financial resources (mean = 1.83), availability of skilled staff (mean = 1.64), ICT infrastructure (mean = 1.73), security measures (mean = 1.59), national policies (mean = 1.49), and internal circulars (mean = 1.59) were all deemed sufficient to support implementation. National policies and guidelines received the highest rating (23 respondents selected "Very Adequate"), indicating their strong role in facilitating e-office operations. Training on the e-office system and ICT skills, while generally adequate, showed some gaps, as five respondents rated it as "Inadequate." Similarly, the integration of the e-office system with other institutions also presented room for improvement, with seven respondents indicating some level of inadequacy. Two respondents who selected "Others" emphasised the necessity of

proper network devices and material support to maintain effective and continuous use of the system. The quantitative findings align with insights from the interview sessions. One respondent from eGA stated:

> *The government is making necessary investments in capacity building, funding, skilled staff, and ICT infrastructure to ensure the e-office system drives enhanced public service delivery through improved efficiency, transparency, and accountability. Efforts also include providing national policies and guidelines (Respondent 02).*

Both quantitative and qualitative, the results suggest that the majority of public institutions are well-positioned to implement the e-office system, benefiting from supportive national policies, strong leadership commitment, and substantial investments in ICT infrastructure.

These findings align with the existing literature; for example, Kumar and Singh (2021) emphasise that adequate financial planning and human resource development are essential for the successful implementation of ICT systems in public organisations. Yusuf and Chelladurai (2022) posit that well-trained records professionals are crucial for maintaining system credibility and ensuring operational success. Leadership commitment also emerged as a key success factor. For instance, at MCDGWSG, all the respondents reported that the Permanent Secretary had fully endorsed the e-office system by discontinuing the use of paper-based records and mandating all transactions be conducted digitally. This reflects Carter and Bélanger's (2020) conclusion that visible and consistent executive support is vital for overcoming resistance to new technologies and driving organisational change.

However, despite the efforts made, some challenges remain. Training gaps and system integration issues were noted, echoing the concerns raised by Mwanyika and Mmbaga (2023), who argue that capacity-building and interoperability are often neglected in digital transformation efforts within the public sector. Insufficient training limits users' ability and confidence to utilise the e-office system effectively. In contrast, poor integration with other systems impedes seamless information exchange, which is essential for efficient and responsive public service delivery.

Thus, the study concludes that Tanzanian public institutions demonstrate strong organisational readiness for implementing the e-office system in mail management, supported by adequate ICT tools, infrastructure, leadership, and policy. This aligns with the IEM and TAM, which emphasise infrastructure, user perceptions, training, and institutional support. However, gaps remain in equitable resource distribution, equipment reliability, user training, and system integration. Addressing these issues is essential for optimising performance and ensuring sustainability. Thus, the findings highlight the need for continued investment in infrastructure, capacity building, and inclusive policies to advance digital records management in the public sector.

4.6. Employee Perceptions in Implementing the Use of the e-office System for Mail Management in Public Organisations

This section explores employee perceptions regarding the implementation of the e-office system for mail management in public organisations. It focuses on key areas, including perceived user-friendliness, simplicity, and functionality of the e-office system; employee preferences between digital and paper-based records management systems; and the extent to which employees promote and support the use of the e-office system within their departments. These themes provide insight into both individual experiences and broader organisational attitudes toward adopting digital mail management solutions.

4.6.1. Perceived User Friendliness, Simplicity of Use and Functionality of e-office System

This subsection explores employees' perceptions of the e-office system used for mail management within the selected public organisations. The section focuses on evaluating the system's perceived simplicity, user-friendliness, and overall functionality as key factors that influence users' adoption and the ongoing utilisation. Employees' experiences and satisfaction levels with the system are examined to understand how intuitive and accessible they find the platform. The findings are summarised in Table 4.9:

Table 4.9: Summary of Employees' Perceptions, Satisfaction, and System Functionality Regarding E-Office Mail Management

Employees' perceptions of the simplicity of e-office system use for mail management in organisations.			Employees' perceptions of user friendliness of the e-office system for mail management in organisations			Level of satisfaction with the use of the e-office system for mail			The functionality of the e-office system for mail management in your organisation		
Description	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**	**Description**	**F**	**%**
Very simple	22	52	Very friendly	20	48	Very satisfied	17	41%	Strongly agree	17	40
Simple	19	45	Friendly	21	50	Satisfied	21	51%	Agree	23	45
Complex	1	2	Neutral	1	2	Neutral	3	7%	Neutral	2	5
Extremely complex	0	0	Unfriendly	0	0	Dissatisfied	0	0%	Disagree	0	0
Total	**42**	**100**	Extremely unfriendly	0	0	Extremely dissatisfied	0	0%	Strongly disagree	0	0
			Total	**42**	**100**	**Total**	**41**	**100**	**Total**	**42**	**100**

Source: *Field Research Data 2024*

The quantitative findings presented in Table 4.9 indicate that the majority of employees perceive the e-office system as user-friendly and easy to use. Specifically,

52 per cent of the respondents described the system as "very simple" and 45 per cent as "simple" to operate, and only 2 per cent indicated it was "complex", and none described it as "extremely complex." Findings from interview also concurred with quantitative data above, one respondent from OSHA stated, *"...mhh. e-office system is the easiest system compared to all other electronic systems in the public service.* Similarly, Respondent 3 from PO-PSMGG informed,

> *"it is easy to use, as we are operating on version 5.0, since its features are straightforward and very easy to understand.... previous system version had many shortcomings. We identified several issues and shared them with RAMD and eGA, who later addressed them in Version 5* (Respondent 9).

Regarding user-friendliness, 48 per cent of the respondents rated the system as "very friendly" and 50 per cent as "friendly," and only 2 per cent remained neutral. Notably, no respondents found the system unfriendly or extremely unfriendly. These overwhelmingly positive responses demonstrate that the system's design and interface align well with user needs and expectations. The interview data supported the research results, offering deeper qualitative validation. Respondent 2 from OSHA reported, *"e-office system is very user-friendly, even for me, who is nearing retirement, born before the era of computer technology, I simply use it without prior computer skills..."* Also, Respondent 3 from PO-PSMGG stated, "The e-office system has an excellent *and user-friendly working interface".* These personal testimonies illustrate that the system is accessible even to users with minimal ICT proficiency.

Regarding the level of satisfaction with the use of the e-office system for mail management, as shown in Table 4.9, 17 (41%) out of 41 respondents reported being very satisfied, while 21 (51%) were satisfied. These findings present a combined satisfaction rate of 92 per cent. Only 7 per cent of the respondents expressed neutrality, and no respondents reported dissatisfaction. Interview data corroborate these quantitative findings, revealing that users experience tangible improvements in mail management processes. One interviewee, Respondent 1 from the MCDGWSG, observed, "*...Officers are delighted, with most action officers now preferring the e-office system over the traditional paper-based system..."* This preference indicates both satisfaction and an attitudinal shift towards embracing digital workflows. Another Respondent 2 from MCDGWSG stated, *"... am highly satisfied with e-office system because it allows me to efficiently perform all registry essential tasks such as receiving, registering, distributing, date stamping, tracking, indexing, and coding of mails*..." This confirms that the system has met its functional design goals.

Similarly, regarding perceived system functionality, 40 per cent of respondents strongly agreed and 55 per cent agreed that the system effectively supports mail management, resulting in a 95 per cent positive agreement. Only 5 per cent were neutral, and none disagreed. These findings suggest overwhelming acceptance of the system and a strong perception that the system meets operational requirements effectively. Interviews also concur with these findings, as Respondent 1 from

UDOM further emphasised, "*The system is excellent and has significantly simplified work, as it now allows users to input and access many more files than before."* These experiences align with TAM, particularly the constructs of PU and PEOU, which are key determinants of user acceptance. The system is seen as not only enhancing productivity but also reducing the cognitive load, even for users with limited ICT skills. As one respondent noted, *"I simply use it without prior computer skills,"* reflecting a high level of accessibility across user demographics.

Both qualitative and quantitative findings revealed a strong consensus among users that the e-office system is simple, user-friendly, and effective in supporting mail management tasks. Most users described the system as easy to operate, with no reports of it being overly complex or unfriendly. Interview responses reinforced this perception, highlighting that even individuals with limited computer skills or nearing retirement found the system intuitive and accessible. Users also expressed high satisfaction with the system's performance, noting significant improvements in efficiency and functionality, particularly with the latest version that addressed earlier shortcomings. Testimonials emphasised its practical benefits, such as simplifying the handling of registry tasks and encouraging a shift from paper-based to digital workflows. These results align with key aspects of the TAM, indicating broad acceptance driven by perceived usefulness and ease of use.

These findings are in line with the insights in the existing literature; for example, Zhang et al. (2022) identified intuitive interfaces as a key factor for a successful e-office implementation in Chinese public institutions. Similarly, Smith and Johnson (2022) linked ease of use with higher adoption rates in digital mail systems across U.S. Government Agencies. Conversely, Kashaija (2023) found that the e-office dashboard in Tanzania's Ministry of Finance was not user-friendly, a contradiction likely explained by differences in system versions or organisational ICT maturity. It is plausible that the current upgraded version has addressed previous usability limitations, enhancing its acceptance.

These findings can be further explained by TAM, which theorises that system adoption is primarily influenced by PEOU and PU. According to Davis (1989), PEOU refers to the extent to which an individual believes using a system will be free of effort. In this study, the 98 per cent favourable rating for ease of use suggests that users perceive the e-office system as intuitive and manageable. The statement by Respondent 1 that "*…the system is usable even without prior computer skills,*" illustrates a strong PEOU. PU, on the other hand, relates to the system's perceived contribution to job performance. Respondent 2's preference for the e-office over the traditional paper-based system indicates a strong sense of the usefulness of the former over the latter in streamlining tasks and increasing efficiency. As TAM posits, when both PEOU and PU are high, users are more likely to accept and continue using the technology (Venkatesh & Davis, 2000).

Literature further supports these observations; for instance, Mrema and Mkungu (2023) found similar patterns in Tanzanian public institutions, reporting high satisfaction due to improved document tracking and operational efficiency. Lee and Choi (2023) highlighted that system satisfaction is often tied to enhanced productivity and user support, while Zhang and Liu (2022) identified user satisfaction as a critical factor in system success, particularly in reducing administrative burdens. Additionally, studies by Abdallah and Kopoka (2024) at PO-PSMGG indicated that 90 per cent of the respondents believed the e-office system improved customer service and accelerated service delivery, findings that parallel the current study.

Therefore, the findings show that the e-office system is widely accepted as easy to use, user-friendly, and effective in improving mail management. This aligns with the TAM, as users reported both high ease of use and usefulness, which drive system adoption. Supporting literature echoes these findings, emphasising the importance of intuitive design and improved efficiency. Although earlier versions had some usability issues, the current system appears to have resolved them, leading to increased satisfaction and broader acceptance in the public sector.

4.6.2. Preference for Records Management Systems

This subsection examines employees' preferred records management systems among digital (e-office), paper-based, or hybrid in selected Tanzanian public institutions. The aim was to understand user preferences and the underlying reasons, offering insights into the perceived benefits, limitations, and contextual challenges of each system. This helps the researchers to assess the progress of digital records management adoption. Respondents were asked to indicate their preferred system and explain their choice. Table 4.10 presents a summary of their responses.

Table 4.10: Users Preference for Records Management Systems

Description	Frequency	Perc ent
Paper-based system	2	4.8
E-office system	25	59.5
Hybrid system	15	35.7
Total	***42***	***100***

Source: *Field Research Data 2024*

Findings from the study indicate that the majority (59.5%) of employees preferred using the e-office system, suggesting a strong inclination toward digital solutions for managing records. However, a significant proportion (35.7%) reported a preference for a hybrid system that incorporates both electronic and paper-based methods. In comparison, only a small fraction (4.8%) still favoured the use of paper-based systems alone. These findings align with interview responses, as one Respondent from OSHA stated, "... *I no longer wish to go back to using paper records again ...*"

Similarly, Respondent 3 from MCDGWSG remarked, "… *here, the e-office system is widely preferred and actively promoted by the Permanent Secretary…"*

The preference for hybrid systems is primarily rooted in practical and infrastructural realities. Respondents cited several limitations associated with the full adoption of electronic systems, such as unreliable electricity supply, slow internet connectivity, and the necessity for manual processes in critical functions such as financial approvals and signature verification. As stated by one respondent from eGA, *"…for security concerns and unreliable electricity to support electronic systems, we need to continue using both systems in parallel. As a developing nation, we still have a long way to go..."* Similarly, Respondent 1 from the PC emphasised, *"…It is important to use both systems, i.e., paper records and the e-office system, particularly when processing payments, as Accountants often need to verify signatures on hard copies..."* These voices reflect both the constraints of the working environment and the need to ensure operational continuity, even when digital systems are adopted.

These findings are in line with insights from scholarly literature, which underscores the contextual nature of digital adoption in African public institutions. Ngulube and Tafor (2021), for example, highlight that hybrid systems remain dominant in many government organisations across Africa due to infrastructure deficiencies and legal requirements that necessitate physical documentation. Similarly, Katuu (2018) observed that hybrid approaches offer greater flexibility and serve as a bridge between old and new systems, helping institutions gradually transition toward fully digital environments without sacrificing reliability.

The preference for digital records management, however, supports the features of TAM, particularly the constructs of PU and PEOU. High preference for the e-office system reflects users' belief in its ability to enhance their job performance and streamline workflows. Many respondents acknowledged that the e-office system has improved their efficiency, simplified tasks, and enabled easier retrieval and sharing of records, factors that contribute to strong behavioural intentions to continue using the system.

From the perspective of the IEM, the ongoing reliance on hybrid systems can be interpreted as part of the implementation trajectory. The IEM emphasises the role of organisational readiness, stakeholder engagement, and environmental constraints in determining the success of technology adoption. In this context, while user acceptance of the e-office system is high, full implementation effectiveness is constrained by infrastructural and procedural barriers, such as poor internet coverage and entrenched requirements for physical documentation. These findings show that technological success is not solely dependent on system design, but also on the institutional environment and broader ecosystem in which the system operates.

On the other hand, a minority of respondents preferred traditional paper-based systems, for example, Respondent 4 from UDOM reported, "*… I feel that paper records are safer compared to electronic records systems, which can be hacked…*" Another respondent from MCDGWSG had this to say, *"… I prefer paper because I am certain it will always be available. Since the e-office system can sometimes be unavailable or down, we are forced to use paper..."* Also, another Respondent from OSHA reported, *"… some financial and legal procedures still require the presence of paper documents ..."* These voices raised concerns related to system privacy, data security, and the risk of losing digital records.

This resonates with the findings of Abdallah and Kopoka (2023), who reported that trust in electronic systems remains low among some public servants due to fears of cyber threats and inadequate data recovery plans. Despite these concerns, the overwhelming preference for the e-office system suggests that public sector institutions are moving toward embracing digital transformation, provided that technical, legal, and infrastructural concerns are addressed.

Thus, in this subsection, while the e-office system is the most preferred records management tool among public employees, the persistence of hybrid system usage reflects the complex operational landscape of Tanzanian public institutions. Digital tools are recognised for their efficiency and usability, as demonstrated by the majority preference and interviewee testimonials. However, limitations in infrastructure, procedural requirements, and system trust continue to justify the parallel use of paper records. Therefore, successful digital transformation will require not only technical improvements but also strategic efforts to build trust, upgrade infrastructure, and formalise hybrid systems through policy frameworks. A phased and context-sensitive approach, grounded in both TAM and IEM models, is essential to ensuring inclusive and sustainable records management reform in the public sector.

4.6.3. Promotion and Support of E-office System Use

This subsection examines whether employees in public institutions actively promote the use of the e-office system in their departments. The aim was to assess their behavioural intention, engagement, and advocacy in support of digital transformation. Understanding these factors helps gauge the system's integration and identify areas needing further support. Respondents were asked if they promote the use of e-office in their department or office. Table 4.11 summarises their responses:

Table 4.11: Employees Perception on promoting the use of e-office

Description	Frequency	Percent
[ ] Yes	40	95
[ ] No	0	0
[ ] I do not know	2	5
Total	**42**	**100**

Source: *Field Research Data 2024*

Findings from the study reveal overwhelming support for the e-office system among employees. As shown in Table 4.11, out of 42 respondents, 95 per cent (40 individuals) indicated that they promote the use of the e-office system in their departments, while none explicitly denied doing so. Only a small proportion, 5 per cent (2 respondents), expressed uncertainty regarding their role in promoting the system. This distribution underscores a strong behavioural commitment among staff to advocate for the e-office system, reflecting a positive institutional culture toward digitalisation.

Interview responses corroborate these quantitative findings. Respondent 2 from OSHA reported, *"...the system has already been widely promoted and accepted by staff...promotional efforts included personal advocacy and providing positive support for its adoption and use..."* This statement highlights that beyond formal training, internal champions play a critical role in encouraging system use. Similarly, the Head of Records Management Unit from UDOM explained, *"...We used various efforts to convince Action Officers to use the e-office system because initially, it was perceived that the system was meant for registry staff only. Therefore, it was necessary to use methods that prevented physical file movements. Additionally, RAMD and e-GA came to provide extra training and boost our morale..."* These proofs emphasise the importance of peer advocacy, training interventions, and role clarification in system adoption.

Quantitative and qualitative findings show strong employee support and active promotion of the e-office system, with most respondents advocating its use. Interviews confirm that peer encouragement, training, and clear role communication have been key to overcoming initial resistance and driving wider adoption, highlighting the importance of both individual and organisational efforts in successful implementation.

The findings align with previous research, such as Akotia and Anane-Simon (2021), who observed that in Ghanaian public institutions, employees' willingness to promote digital systems such as e-office significantly contributed to system acceptance. Likewise, Kimaro and Sahay (2022) concluded that employee advocacy is pivotal in overcoming resistance and building momentum for ICT integration in Tanzanian public organisations. Their findings stress that the more staff engage in

promoting such systems, the more likely they are to bridge knowledge gaps among peers. Moreover, Mwenja, Nguvumali, and Mwaimu (2017) argue that systems perceived as user-friendly and valuable naturally generate internal advocates, and this internal advocacy translates to smoother adoption processes and higher rates of sustained use.

While overall employee support is robust, the small proportion of respondents who expressed uncertainty reflects potential gaps in training, communication, or role clarity. As Chilunda and Mbatia (2018) note, successful digital transitions also depend on ensuring that every staff member understands how digital systems relate to their roles and responsibilities. Mutalemwa and Mngwira (2020) also emphasise that organisational willingness and leadership support, when paired with structured training and inclusive transition processes, can help mitigate uncertainty and resistance among employees.

Therefore, the study finds that employee perceptions of the e-office system for mail management in public organisations are mainly positive, with users viewing it as functional, user-friendly, and supportive of daily tasks. High satisfaction and active promotion indicate readiness for digital transformation. However, the continued reliance on hybrid systems points to operational and infrastructural challenges. Guided by TAM and IEM, the findings suggest that sustainable adoption requires not just technological readiness, but also strong organisational support, improved infrastructure, continuous capacity building, and inclusive policies to ensure long-term success.

4.7. Challenges in Implementing e-office for Mail Management in Public Organisations

This section highlights the challenges affecting the application of the e-office system for mail management in public organisations. It also provides mechanisms for addressing such challenges.

4.7.1. Challenges in Implementing e-office for Mail Management in Public Organisations

Respondents were asked to indicate the extent to which they agree with the presented factors affecting the effective implementation of e-office in their organisation, with answers rated from: *1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree*. The responses are as follows:

Table 4.12: Factors affecting effective implementation of e-office system for mail management in organisations (n = 42)

SN	Description	Extent of challenge				
		1	2	3	4	5
1	Inadequate change management strategy for end-users to accept change	5	22	8	3	4
2	Organisation budgetary constraints	5	23	4	5	3
3	Resistance among employees	5	19	5	4	8
4	Inadequate skilled and knowledgeable staff	7	18	2	5	8
5	Negative attitudes towards the use of computers and technophobia	7	16	4	5	7
6	Organisation culture and bureaucracy	5	19	6	4	7
7	User friendliness of the e-office system	6	19	6	4	6
8	Duplication of documents received electronically and manually	6	23	4	3	4
9	e-office is not a platform for performing my specialised duties	2	17	8	4	7
10	Absence of an electronic records management policy and facilities to execute e-office	2	20	8	4	5
11	Unstable internet services, the e-office system is slow and often goes down	4	18	9	4	6
12	Challenging to get immediate technical assistance when one requires help, compared to the previous manual process	4	16	7	6	8
13	Inadequate IT resources such as computers, scanners and printers	4	16	8	5	8
14	Some e-office mails are deleted from servers before being archived	3	17	8	4	7
15	Others (please specify)					

Source: *Field Research Data 2024*

The study findings revealed that most of the respondents agreed on several challenges impacting the implementation of e-office systems in public organisations. Out of 42 respondents, inadequate change management strategies emerged as a significant issue reported by 64 per cent. Budgetary constraints were also highlighted by 67 per cent of the respondents, indicating that financial limitations constrain the adoption of e-office tools. Resistance among employees was another notable challenge reported by 57 per cent of the respondents, noting that reluctance among staff impedes a smooth transition to e-office. Additionally, 60 per cent of the respondents agreed that the lack of adequately skilled personnel is a significant impediment to the system's practical use. Negative attitudes and technophobia were cited by 55 per cent of the respondents as factors slowing the progress of e-office adoption.

Organisational culture and bureaucracy were identified as barriers by 57 per cent of the respondents, indicating that entrenched norms and bureaucratic practices pose challenges to implementation. User-friendliness of the e-office system was another concern reported by 60 per cent of the respondents, highlighting that user-unfriendly interfaces pose challenges to adoption. The duplication of documents, both electronic and manual, was pointed out by 69 per cent of the respondents as a recurring issue, leading to inefficiencies. Additionally, 45 per cent of the respondents felt that the e-office system was not tailored to their specific job roles, reducing its perceived usefulness.

Absence of records management policies and facilities was cited by 52 per cent of the respondents (as a significant gap, undermining system implementation). Unstable internet and system downtime were also significant issues, reported by 52 per cent of the respondents, who agreed that slow and unreliable internet significantly hampers the usability of e-office systems. Lack of immediate technical support was noted by 48 per cent of the respondents, who agreed that delays in technical assistance make the transition less efficient compared to manual processes. Insufficient IT resources, such as the availability of critical hardware (e.g., computers, printers, and scanners), were noted by 48 per cent of the respondents as a challenge. Lastly, document loss from servers due to deletion before archiving was raised as a concern by 48 per cent of the respondents, highlighting weaknesses in the system's reliability.

Additional challenges, as depicted by those selected "other", included leadership and training, which were cited as critical factors. Respondents suggested the need for active leadership support, systematic training programs, improved IT office support, and enhanced knowledge-based functionalities within the e-office system.

The comparison between Tables 4.8 and 4.12 highlights both efforts and challenges in implementing the e-office system for mail management. Table 4.8 shows that organisations are taking steps such as providing training, upgrading systems, offering technical support, and leveraging leadership involvement to enhance implementation. However, Table 4.12 reveals persistent challenges, including insufficient training, resource limitations, system interoperability issues, and employee resistance to change. While training and leadership support are emphasised as critical in both tables, the contradiction lies in the gaps that remain despite the reported measures.

During the interviews at some of the researched institutions, it was reported that they sometimes experience power cuts due to the absence of a standby generator, which disrupts the internet and affects e-office availability. Respondent 1 from the MCDGWSG noted, "*e-office system relies on electricity, when power goes off, everything is stuck…*"

A significant challenge raised during interviews with the administrative staff, Records Management staff, and IT personnel in public institutions surveyed was the

use of VPNs. While VPNs are intended to simplify work and facilitate the goals of the e-office system by sometimes allowing Action Officers to work remotely, they also pose significant concerns regarding the confidentiality of records. The concerns revolve around potential misuse of VPNs, inadequate oversight of user activity, and the risk of data breaches. Respondent 1 from PO-PSMGG highlighted the issue, stating:

> *…Truly, the registry office is open everywhere. Although employees are trained on public service ethics, individual behaviours vary, and conflicts of interest can arise. When an Action Officer is granted VPN access, there is no guarantee about where or how the laptop will be used. Some may use these devices for personal business, allow their children to access them, or, in cases of personal conflicts, even leak confidential information...* (Respondent 10).

Respondent 3 from PO-PSMGG added, "Using VPN is like taking a registry /files home, *something that is forbidden in paper records management systems*". Also, Respondent 2 from OSHA said, "*VPN has somehow eliminated issues of office duties delegation*. Respondent 1 from eGA also supported this by saying, "*VPN have weakened issues of succession plan because officers especially of higher positions when travelling they work even outside their offices through VPN hence deny officers of lower positions to be delegated and learn to perform certain duties.*"

The use of VPNs in public institutions raises similar challenges worldwide. According to Rahman and Shamsuddin (2021), while VPNs enhance remote work capabilities, they also present risks of unauthorised access and data breaches if not adequately monitored. Implementing time-restricted VPN access and multi-factor authentication (MFA) can address these vulnerabilities. Moreover, according to Mahmood et al. (2020), behaviour and ethics among employees significantly affect data security in e-Government systems. Thus, Khan et al. (2019) recommend that institutions implement Global Positioning System (GPS) tracking and activity logs for VPN users to maintain accountability. They also emphasise that devices used for remote work must have updated security features, such as encryption and user-specific access permissions, to prevent data misuse. Finally, Chigona and Chetty (2017) advocated for strengthening governance mechanisms to address security concerns in public sector digital systems.

Numerous scholars have highlighted the challenges that align with those encountered during the implementation of e-office systems in public organisations. Key barriers include inadequate change management strategies, budgetary constraints, resistance to change, skill gaps, and insufficient training (Satish & Rizwana, 2023; Tadesse & Mulubrhan, 2017). Studies from Nigeria (Obodo & Anigbata, 2018) and Namibia (Karlos, 2010) pointed to infrastructural inadequacies, policy gaps, and management inefficiencies as significant hurdles. Leadership and strategic planning are emphasised as critical for overcoming financial and technical challenges (Kavaliauskas & Kunciene, 2020; Ahmed & Iqbal, 2020). In Sub-Saharan Africa,

including Tanzania, e-office initiatives face underutilization and persistently rely on paper-based systems despite substantial government investments (Newa, 2019; URT, 2016). These issues are particularly acute in Local Government Authorities, where the adoption and development of e-office systems remain limited (Kashaija, 2021; Hamad, 2018).

Despite the emphasis placed by the IEM on the need for management support, financial resources, and implementation policies and practices for the effective adoption of new technology, findings indicate that the studied areas were characterized by inadequate change management strategies, budgetary constraints, insufficient IT resources, and the absence of records management policies and facilities which are essential elements for the successful implementation of the e-office system for mail management in public institutions. Regarding the IEM model, these factors need to be addressed to enhance the effective implementation of the e-office system for mail management in public institutions. On the other hand, the TAM indicates that individual perceptions, such as perceived usefulness and perceived ease of use, are critical factors influencing the adoption and use of technology. Negative perceptions in these areas can hinder technology acceptance. The study also found that the implementation of the e-office system for mail management was affected by resistance among employees, negative attitudes, and technophobia in the studied areas. These findings underscore the multifaceted obstacles spanning individual, organisational, and national levels that hinder the successful adoption of e-office systems in developing regions.

Therefore, public offices need to consider the challenges of budgetary constraints, resistance to change, infrastructural resources, absence of comprehensive policies, leadership, strategic planning, and individual perceptions as factors hindering the implementation of any technology. These issues must be addressed for the effective implementation of the e-office system for mail management in Tanzania's public service.

4.7.2. Suggestions for Effective Implementation of E-office System for Mail Management in the Public Organisations

The final aspect of this section invited respondents to provide suggestions for the effective implementation of the e-office system for mail management in the public service. These responses were selected from the last question of the questionnaire guide, where they were asked to offer additional qualitative insights, as well as during the interview sessions.

Responses from MCCDGWSG emphasised the need to establish clear goals and objectives to guide implementation, conduct pilot testing to identify challenges, and provide training on e-office usage, ICT skills, and records management. They also highlighted the importance of enabling e-office access without government internet or VPN, ensuring regular system maintenance, integrating with other

organisational systems, and implementing backup and disaster recovery measures. Additionally, they suggested simplifying the system for ease of use, conducting needs assessments to address department-specific requirements, and introducing performance monitoring dashboards to track mail handling efficiency.

Similarly, MCDGWSG respondents stressed the need to strengthen information security, improve internet connectivity for seamless communication, implement sender feedback mechanisms to confirm mail receipt, and enhance user awareness through frequent training. They also recommended expanding the e-office system to all government institutions for more effective service delivery.

Responses from OSHA raised the issue of the provision of continuous awareness and training programs to all employees. In an interview, Respondent 1 suggested, "*...I think relevant authorities should provide an electronic registry procedure manual similar to paper records*". Respondent 3 added, "*…there is a need for HR officers to be taught key records office issues".* Respondents from eGA emphasised the importance of regular audits and monitoring to ensure timely responses to emails. They also highlighted the need to upgrade infrastructure, particularly internet connectivity, to support e-office operations in remote areas. Additionally, they recommended improving VPN functionality through real-time use monitoring, mobile access, and system integration.

Finally, PO-PSMGG respondents highlighted the importance of conducting comprehensive training led by external experts with specialised knowledge in records management, rather than relying on in-house personnel lacking expertise. The summarised views from the above researched public organisations, arranged in logical order, are as follows:

Table 4.13: Suggestions for effective implementation of the e-office system for mail management in the public organisations

SN	Areas of Concern	Basic Explanations	Suggestions for Improvement
1	The Need for Clear Goals and Objectives	Clear goals and objectives provide direction and align efforts for the successful implementation of the e-office system. Without defined targets, efforts may become disjointed, reducing efficiency and focus.	• Establish clear and measurable objectives for e-office implementation to ensure alignment across departments. • Pilot test the system with select groups to identify potential issues early and make necessary adjustments before full-scale rollout.
2	Comprehensive Training on the e-office System	Training is critical to equipping employees with the skills needed to use the system effectively. Limited training or reliance on unqualified trainers can hinder the adoption and efficiency.	• Conduct in-depth training on the e-office system, incorporating basic ICT skills for users. • Engage external experts for training sessions to ensure high-quality guidance. • Build capacity by hiring skilled records management professionals.
3	Accessibility and Connectivity of the e-office System	Reliable access and connectivity are vital for the system's functionality. While VPNs provide flexibility, permanent use raises concerns about data confidentiality and system abuse.	• Improve internet connectivity for reliable and efficient system access. • Restrict VPN access to limited durations, with formal approvals for extensions. • Strengthen security with time-bound passwords, multi-factor authentication, and encryption. • Introduce GPS tracking and real-time reporting to monitor activity. • Enable laptop cameras during VPN sessions for environmental oversight. • Perform regular audits to identify and address unauthorised access. • Enhance employee training on ethics and data confidentiality.
4	Maintenance and Integration of the e-office System	Regular maintenance and integration with other organisational systems ensure smooth operation, reduce downtime, and enhance system functionality.	• Schedule regular maintenance and updates to address technical issues and improve performance. • Integrate the e-office system with other systems for seamless data exchange and workflow management. • Develop disaster recovery plans to handle potential system failures. • Provide system access to all employees, with limitations, to promote familiarity, succession planning and efficiency.

SN	Areas of Concern	Basic Explanations	Suggestions for Improvement
5	Simplification of the e-office System and Network Strength	A complex system can discourage user adoption. Simplifying the system and strengthening network infrastructure will enhance efficiency and service delivery.	• Continuous simplification of the e-office system interface to make it user-friendly. • Invest in robust network infrastructure to improve system speed and reliability.
6	Needs Assessment and Performance Monitoring	Understanding specific departmental needs ensures that the e-office system is tailored to user requirements. Performance monitoring improves accountability and identifies bottlenecks.	• Conduct needs assessments to determine the unique requirements of departments and users. • Use performance dashboards to monitor key metrics, such as mail handling efficiency and turnaround times.
7	Security and Feedback Mechanisms	Protecting sensitive information and providing feedback mechanisms are crucial for ensuring data security and improving accountability in mail management.	• Strengthen system security measures to safeguard documents and information. • Implement feedback systems to allow senders to confirm timely receipt of mail.
8	Leadership Commitment and Awareness	Leadership plays a pivotal role in driving system adoption and fostering a culture of innovation and accountability.	• Encourage leaders to actively support and promote the system by setting a positive example. • Increase awareness of the e-office system among staff through frequent communication and demonstrations.
9	Auditing and Monitoring	Regular audits and monitoring of system users ensure accountability, compliance, and timely action on tasks, improving overall system performance.	• Conduct periodic audits of the e-office system to evaluate user performance and adherence to procedures. • Encourage compliance through monitoring mechanisms and enforce accountability where needed.
10	Infrastructure Investment	Adequate IT infrastructure is fundamental to the successful implementation and operation of the e-office system, particularly in resource-constrained environments.	• Invest in upgrading IT infrastructure, including reliable internet, computers, printers, and scanners, to support the e-office system. • Ensure consistent maintenance and availability of IT resources to minimise downtime.

Source: *Field Research Data 2024*

To effectively implement an e-office system for mail management in public organisations, it is essential to consider several key strategies supported by current literature. According to Abdallah (2020), enhancing ICT infrastructure is crucial, ensuring robust and reliable systems, including high-speed internet connectivity, adequate servers, and backup systems. Regular training and capacity-building sessions for employees are necessary to familiasize them with e-office system, thereby improving their efficiency and reducing resistance to change. Additionally, implementing stringent security measures, such as encryption, access controls, and regular security audits, is vital to protect confidential information.

Developing clear policies and guidelines for the use of an e-office system ensures consistency and compliance with organisational standards. Providing continuous technical support to address any issues that arise during the use of the e-office system helps minimise downtime and maintain productivity. Lastly, regular monitoring and evaluation of the e-office system's performance through user feedback and performance metrics are necessary for identifying areas for improvement.

Generally, the objective of challenges in implementing the e-office for mail management in public organisations and the suggestions for addressing them can be benchmarked using IEM and TAM, emphasising the importance of organisational readiness, resource allocation, and management support, which are critical factors in overcoming implementation challenges. TAM focuses on the alignment between technology and organisational goals, user-friendliness, and perceived usefulness of the system. The absence of all these factors acts as a challenge that hinders effective e-office system implementation. It is suggested that challenges such as technical difficulties or low user adoption can be addressed by ensuring the system is intuitive, provides clear benefits to users, and aligns with the overall objectives of the organisation. Both models highlight the necessity of addressing organisational culture, leadership involvement, and user engagement to overcome challenges and enhance the e-office system's implementation.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of findings, conclusion, recommendations of the study, and areas for further studies. The study assessed the achievements and challenges of implementing the e-office system for mail management in public organizations.

5.2. Summary of Findings

The findings of this study are presented in alignment with the study objectives. Specifically, the study aimed to: (1) assess the achievement of the e-office system for mail management, (2) analyses organizational capability in implementing the system, (3) evaluate employees' perceptions of its implementation, and (4) identify challenges encountered in the process.

5.2.1. Achievement of the E-office System for Mail Management

The study revealed that the implementation of the e-office system for mail management has been largely successful in public organizations. Respondents rated the system as highly effective, citing its ability to meet organizational needs. A key factor contributing to this success is the integration of various ICT tools, such as desktop computers, laptops, tablets, and smartphones, which enhance accessibility and operational efficiency. The system effectively manages different types of records, including restricted, open, and confidential records, demonstrating its capability to address complex records management requirements. Additionally, respondents reported significant improvements in operational efficiency, streamlined document retrieval, and enhanced data security. These advancements align with global trends in adopting digital solutions for public service.

5.2.2. Organizational Capability in Implementing the E-office System

Findings indicated varying levels of organizational capability in implementing the e-office system. While many users expressed confidence in operating the system, gaps in operational knowledge were evident, highlighting the need for more comprehensive training. Training was identified as a crucial factor in building capacity, with respondents reporting participation in workshops, seminars, short courses, peer learning, and self-initiated training. However, inconsistencies in training availability and quality left some employees underprepared. Organizational readiness to adopt the system was generally rated as moderate to high. Additionally, feedback on awareness programs was mixed, with some respondents questioning

their effectiveness in fostering widespread understanding and acceptance. Organizations employed various enforcement mechanisms, including legal frameworks, internal guidelines, circulars, memos, and security measures, though their effectiveness varied.

5.2.3. Employees' Perceptions of the E-office System

Overall, employees perceived the e-office system positively, appreciating its user-friendly interface, ease of navigation, and efficiency in mail management. Most respondents expressed high satisfaction with the system's functionality, particularly in streamlining processes and enhancing efficiency. Many employees preferred a fully electronic or hybrid mail management system due to its operational advantages, simplicity, and environmental benefits. However, a small proportion of employees favoured traditional methods, citing concerns over records confidentiality and familiarity with manual processes. Despite these differences, employees demonstrated a strong commitment to supporting the system's adoption. Nonetheless, resistance to change, system limitations, and varying levels of user proficiency were identified as challenges to broader acceptance.

5.2.4. Challenges in Implementing the E-office System

The study identified several challenges hindering the effective implementation of the e-office system. One of the primary obstacles is budgetary constraints and bureaucratic rigidity. Limited funding, coupled with slow cultural shifts within organisations, has led to delays and resistance in adopting the system. Additionally, lack of technical skills among employees and resistance to change have significantly hindered the successful integration of the e-office system. Many employees lacked the necessary IT competencies, and negative attitudes toward technology further exacerbated the situation.

System usability issues and infrastructure limitations also created significant challenges. Problems such as process duplication, unreliable internet connectivity, and inadequate IT infrastructure reduced the efficiency of the e-office system. These issues created barriers to smooth and effective use of the system, limiting its overall impact. Furthermore, weak leadership support and insufficient training programs contributed to the system's underperformance. Inconsistent leadership commitment and inadequate training efforts led to a lack of engagement and reduced the system's potential benefits. Finally, data confidentiality concerns were a significant challenge. Issues related to data security, including the potential for misuse, generated reluctance among employees to embrace the e-office system fully. The fear of compromised security and unauthorised access to sensitive information led to hesitancy in adopting the system, further slowing its implementation.

Addressing these challenges will be essential for public organisations to enhance the effectiveness of e-office systems and improve overall mail management processes.

5.3. Conclusion

The study conclusions are presented based on the study findings in each objective.

5.3.1. Achievement of the E-office System for Mail Management

Given the above findings on objective one, the study concludes that the implementation of the e-office system for mail management has achieved substantial success in public sector organisations. The system has proven effective in meeting key operational objectives, including improved document retrieval, enhanced data security, and improved ability to manage various types of restricted, open, and confidential records. The integration of ICT tools such as desktop computers, laptops, smartphones, and tablets has further increased accessibility and efficiency. This digital transformation aligns with international best practices in public service modernisation. It demonstrates that the e-office system is capable of addressing complex records management needs while driving significant improvements in workflow efficiency.

5.3.2. Organisational Capability in Implementing the E-office System

The study findings in objective two revealed that organisational capability to implement the e-office system was moderate, with significant variation among institutions. While there was evidence of growing user confidence, gaps in ICT infrastructure and inconsistent training initiatives hampered the full realisation of the system's potential. Training programs, though conducted through various platforms such as workshops, seminars, and peer learning, were inconsistently delivered and often lacked depth. Some organisations demonstrated strong readiness, backed by robust enforcement mechanisms and legal frameworks; however, others lagged due to insufficient infrastructure and ineffective awareness campaigns. Therefore, the study concludes that these disparities underscore the need for a more coordinated and well-resourced implementation strategy to ensure uniform capability across the organisations and the need for capacity building among employees to enhance effective implementation of the e-office system for mail management in public organisations.

5.3.3. Employees' Perceptions of the E-office System

Given the study findings in objective three, the study concludes that employees' perception of the e-office system is overwhelmingly positive. The system's user-friendly interface, ease of navigation, and capacity to streamline mail management tasks were consistently highlighted, indicating users' satisfaction with the system's functionality. Many employees endorsed the shift to digital or hybrid systems due to their efficiency, convenience, and eco-friendliness. However, concerns over data confidentiality and a preference for manual systems among a minority reveal that cultural and psychological factors still influence system adoption. Despite these reservations, the general sentiment reflects a strong willingness among staff to

embrace digital transformation, indicating a favourable climate for long-term system sustainability provided that support structures are strengthened.

5.3.4. Challenges Encountered in Implementation

Given the above findings, the study concludes that despite the successes noted, several key challenges have hindered the full implementation of the e-office system. Financial constraints, bureaucratic inertia, and limited organisational change capacity have delayed broader adoption. A lack of technical skills and negative attitudes toward technology among employees further exacerbated implementation difficulties. Infrastructural deficiencies, including unreliable internet, insufficient ICT equipment, and system usability issues, were significant barriers to effectiveness. Additionally, weak leadership engagement and inadequate training were cited as factors reducing employee motivation and competence. Data confidentiality concerns, particularly the fear of unauthorised access, also contributed to resistance among some users. The study concludes that without addressing these systemic and cultural barriers, the benefits of the e-office system may remain partially unrealised. Also, addressing these barriers through increased investment, leadership commitment, capacity-building efforts, and improved security protocols becomes essential for optimising the system's performance.

Based on the study findings, it can be noted that the e-office system has significantly improved administrative efficiency and document management in public organisations in Tanzania. However, its implementation has not been entirely seamless. Overcoming existing challenges, particularly resistance to change, system limitations, and the need for continuous training, will be crucial for ensuring broader adoption, long-term sustainability, and maximising the system's full potential.

5.4. Recommendations on Ways to Alleviate the Challenges Facing e-office Implementation for Mail Management in Public Organisations

To address the challenges and enhance the implementation of the e-office system for mail management, several strategic recommendations are proposed. In the first objective, to sustain and expand the achievements of the system, measures such as promoting consistent usage through regular training and awareness campaigns are essential. Additionally, enhancing ICT infrastructure to ensure equitable access, conducting comprehensive training programs to improve system proficiency and strengthening security protocols to safeguard sensitive information are crucial. Regular performance evaluations, alongside the integration of the e-office system with other electronic systems like PEPMIS, will streamline workflows and improve overall service delivery. These initiatives will cement the e-office system's role as a cornerstone in enhancing efficiency and accountability within public service operations.

For the second objective, which focuses on improving organisational capability, it is recommended that comprehensive and diverse training programs be developed to address the varying learning needs of employees. This ensures that all personnel gain the necessary proficiency and confidence to use the system effectively. Investment in ICT infrastructure is also vital to eliminate resource disparities and optimise system performance. Furthermore, organisations should revamp awareness programs to communicate the benefits and functionalities of the e-office system, fostering greater employee engagement. Establishing clear and enforceable organisational frameworks, including legal tools and internal policies, will provide the necessary support and security for the system. Strong leadership, coupled with dedicated resource allocation, is also critical for driving the successful integration and sustained use of the e-office system. Collectively, these measures will enhance organisational capability and ensure the system's overall effectiveness for mail management.

In the third objective, to improve employee perceptions and foster wider adoption of the e-office system, public organisations should continue promoting their benefits, emphasising their efficiency, user-friendliness, and environmental advantages. Tailoring the system to better align with employees' workflows and preferences will increase its appeal and usability. To address resistance to change, targeted training programs should be offered to build employee confidence and competence. Continuous support should be provided to ensure a smooth transition and sustained usage of the system. Organisational leaders must actively engage employees in the implementation process, ensuring transparent communication and addressing concerns to foster a sense of ownership and readiness. Furthermore, regular system improvements based on user feedback should be prioritised to meet evolving organisational and employee needs. By adopting these measures, public organisations can improve employee perceptions, boost satisfaction, and enhance the overall effectiveness of the e-office system for mail management. The summary of recommendations is tabulated as strategic interventions in Table 5.1

Table 5.1: Key strategic interventions and activities for recommendations

Issue and Supporting Explanations	Strategic Intervention Statements	Key Activities to Alleviate The Problem	Responsible MDA
1) Establish Clear Policies and Guidelines			
The study found that the absence of uniform policies across institutions leads to inefficiencies and confusion in the management and use of the e-office system.	Develop and disseminate standardized policies and procedures for e-office system use and records management across all public institutions.	• Regularly update policies to ensure consistency. • Communicate policies effectively across all departments.	PO-PSMGG and RAMD
2) Leadership Commitment and Awareness			
Top leadership plays a pivotal role in driving any agenda to adoption and implementation	Ensure top leadership in MDAs play as champions of change in the implementation of e-office system for improved public service delivery	• Encourage leaders to actively advocate for and demonstrate the use of the e-office system by setting a positive example. • Enhance staff awareness of the e-office system through regular communication, internal memos, circulars and hands-on demonstrations and training.	PO-PSMGG
3) Address Cultural and Behavioural Resistance			
Resistance to the system arises due to cultural and behavioural factors, leading to slow adoption and inconsistent usage across departments.	Introduce change management programs and cultivate a supportive environment to ease the transition and address resistance to the e-office system.	• Actively promote the system's benefits. • Lead by example from top management. • Foster a culture of openness and support for staff.	Top management in all MDAs
4) Provide Infrastructure Investment and Resource Allocation			

Issue and Supporting Explanations	Strategic Intervention Statements	Key Activities to Alleviate The Problem	Responsible MDA
Inconsistent resource allocation has been identified as a major barrier to maintaining a functional e-office system and ensuring its long-term success.	Allocate sufficient financial and human resources to support system implementation and it's on going maintenance.	• Allocate dedicated budgets for system implementation and upkeep. • Invest in skilled human resources to manage the system.	Top management in all MDAs
5) Prioritize Upgrading and Standardizing ICT Infrastructure			
The lack of modern infrastructure, to some institutions, contributes to system downtimes and compromises data integrity, affecting overall efficiency.	Enhance internet connectivity and provide modern hardware infrastructure for the e-office system's reliable operation.	• Upgrade internet connectivity across departments. • Provide necessary hardware for system functionality. • Maintain robust network infrastructure and implement disaster recovery systems.	Top management in all MDAs
6) Provide Comprehensive ICT and e-office System Training Programs			
Training gaps are a major barrier to the effective use of the e-office system, leading to slow adoption and poor system proficiency.	Develop and implement comprehensive training programs on ICT skills and the e-office system for employees at all levels.	• Organize on going training programs, including both internal and external experts. • Focus on ICT basics, system-specific functions, and records management best practices.	PO-PSMGG, RAMD and MDAs
7) Programs Strengthen Security Protocols			
Inconsistent adherence to security standards and lack of monitoring mechanisms have exposed the system to data security risks, especially on the use of VPNs	Implement stronger security measures, such as time-bound passwords, restricted VPN access, and regular audits, to safeguard data.	• Introduce time-bound passwords and controlled VPN access. • Conduct regular security audits. • Enhance compliance with confidentiality standards	PO-PSMGG, RAMD, eGA and ICT Heads in MDAs
8) Enhance Integration with Other Organizational Systems			

Issue and Supporting Explanations	Strategic Intervention Statements	Key Activities to Alleviate The Problem	Responsible MDA
System integration issues lead to inefficiencies and hinder seamless data flow between different systems.	Integrate the e-office system with existing organizational systems to streamline operations and enhance data exchange.	• Integrate the e-office system with HRM and finance systems. • Enhance system functionality to streamline workflows and eliminate redundancies.	PO-PSMGG, RAMD and eGA
9) Conduct Performance Monitoring and Feedback			
The absence of performance tracking and feedback systems has slowed down system optimization and hindered necessary adjustments.	Establish performance monitoring and feedback mechanisms to track system performance and ensure continuous system improvements.	• Develop performance dashboards for real-time monitoring and auditing. • Set up feedback loops to address user concerns and system issues.	PO-PSMGG, RAMD, eGA and MDAs Top Management

Source: *Field Research Data 2024*

For effective implementation and oversight, public organisations must strictly adhere to these recommendations to achieve sustainable improvements in e-office system adoption. PO-PSM and RAMD should establish comprehensive monitoring and evaluation (M&E) systems with quarterly reporting frameworks to assess progress across MDAs. These reports should serve as the basis for continuous improvement and reinforce accountability in the implementation of the e-office system.

By adopting these strategies, public organisations will not only overcome existing challenges but also enhance the efficiency, reliability, and sustainability of the e-office system for mail management. These improvements will contribute to better organisational performance, enhanced service delivery, and efficient government operations.

5.5. Areas for Further Studies

This study, which explores the effectiveness of e-office system implementation for mail management in public institutions, along with its successes and challenges, serves as an important starting point for future research. It provides a foundation for other researchers to delve deeper into the subject or examine similar topics to gain a more comprehensive understanding of the implementation of the e-office system and related technologies.

While the present study focused on only six MDAs, there is a clear need to conduct a broader, country-wide study that includes all ministries, departments, and agencies, Local Government Authorities, the Judiciary, and the Parliament. Such a study would

provide a more holistic perspective on the adoption, successes, and challenges of the e-office system in different sectors and at the government level. Additionally, future research could explore the impact of the e-office system on organisational performance, cost-efficiency, service delivery, and employee productivity. Investigating the integration of the e-office system with other digital platforms and exploring solutions to address the identified challenges could further enhance the body of knowledge in this area.

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APPENDICES

Appendix 1: Research Questionnaire for Respondents

The Tanzania Public Service College (TPSC) as per its establishment mandate is currently conducting a research on the topic ***"Exploring the effectiveness of implementing electronic office system for mail management in from selected Tanzania public service institutions: success and challenges".*** *Kindly help to fill the questionnaire as candidly as possible. The College assures you that it will treat the information provided with highest confidentiality and integrity.*

SECTION A: Respondents' Profile

1. Personal work related bio data

   a. Name of Ministry / Department/ Agency/Institution:

   b. Location of the MDA (*mention region and district*):

   c. Position (*job title*) held:

   d. Gender: [ ] Male [ ] Female

   e. Age: [ ] 20- 30 [ ] 31 -40 [ ] 41 -50 [ ] 51 and above

   f. Working experience: [ ] Below 1 year [ ] 1 – 10 years [ ] 11 – 20 years
   [ ] 21 – 30 years [ ] Above 30 years

   g. Highest educational level attained:
   [ ] PhD [ ] Master's Degree [ ] Postgraduate Diploma
   [ ] Bachelor Degree [ ] Diploma [ ] Certificate
   [ ] Secondary Education [ ] Primary education

SECTION B: Achievements on the Use of e-office System for Mail Management in an Organisation: *Please respond by putting a tick (☑) to the appropriate answer*

2. Do you have access to internet in your office? [ ] Yes [ ] No [ ] I don't know

3. If yes, specify kind of internet networks to support e-office implementation in your organisation. [ ] LAN [ ] WAN [ ] Wi-Fi [ ] VPN
   [ ] I don't know [ ] Others (*please specify*)

4. What stage in the implementation of e-office system for mail management purpose is to your organisation?

   [ ] Fully implemented [ ] Still in configuration / installation stage

   [ ] not yet implemented at all [ ] I do not know

5. How frequently do you use the e-office system for mail management?

   [ ] Often [ ] Always [ ] Sometimes [ ] Rarely [ ] Never

6. How would you rate the effectiveness of the e-office system for mail management in your institution?

   [ ] Very effective [ ] somewhat effective [ ] Neutral

   [ ] Somewhat ineffective [ ] Very ineffective

7. What ICT tools are available to support e-office system implementation in your organisation?

   [ ] Computers [ ] Scanners [ ] Printers [ ] Others (*please specify*)

8. Which facilities do you use to access Internet for e-office system? *(You may tick more than one answer)*

   [ ] Desktop Computer [ ] Laptop [ ] Tablet [ ] Smart phone

   [ ] Others (*please specify*)

9. What kind of records do you manage using e-office system? *(You may tick more than one answer)*

   [ ] Restricted open records [ ] Confidential records [ ] Secret records

   [ ] Top secret records [ ] Other records (*please specify)*

10. To what extent do you agree that the following records management benefits have been achieved from the use of e-office system for mail management in your organisation?

SN	Description of item	Level of Extent				
		Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	Reduced backlog					
2.	Reduced storage space					
3.	Easy file tracking and reduced misplacement / loss of files					
4.	Increased fast retrieval process					
5.	Reduce paperwork and maintenance of physical files					
6.	Minimized records office (registry)running costs					
7.	Prevent loss of files and reduced opening of records temporary files					
8.	Improved accountability					
9.	Improved decision-making processes					
10.	Improved transparency					
11.	Improved quality of service delivery					
12.	Reduced customer complaints					
13.	Increased security and confidentiality of records and files					
14.	Reduced delay of records to / from Action Officers					
15.	Increased work morale for Records Staff and other employees dealing with records in daily activities					
16.	Allows integration / data exchange with other institutions					

i. Others (*please specify*)

SECTION C: Examine organizational capability in implementing e-office system for mail management: *Please respond by putting a tick (☑) to the appropriate answer*

12. For how long have you been using e-office system in managing records?

[ ] 1 - 6 months [ ] 7 – 12 months [ ] 1 - 2 years

[ ] 3 -5 years [ ] More than 5 years

13. How well can you operate/ use the e-office system in your department?

[ ] Very well [ ] Well [ ] Somehow [ ] I don't know how to operate it

14. Did you attend any training for operating the e-office system implementation in your organisation? [ ] Yes [ ] No

15. If Yes in qn 13, what kind of e-office system training did you attend? *(You may tick more than one answer)*

    [ ] In the Workshop and seminar attended [ ] In the Short course attended

    [ ] In house training in my office [ ] Others (please *specify*)

16. If Yes in qn 13, was the training relevant to e-office system practice for mail management in your organization?

    [ ] Yes [ ] No [ ] Not sure

17. If No in qn 13, how did you learn to use e-office system for mail management in your organisation? *(You may tick more than one answer)*

    [ ] Learned from the peers [ ] My own initiatives [ ] Others (please specify)

18. If Yes, was the training relevant to e-office system practice for mail management in your organisation?

    [ ] Yes [ ] No [ ] Not sure

19. How did you learn to use e-office system for mail management in your organisation? *(You may tick more than one answer)*

    [ ] In the Workshop and seminar attended

    [ ] In the Short course attended

    [ ] Learned from the peers

    [ ] In house training in my office

    [ ] My own initiatives

    [ ] Others (*please specify*)

20. How do you perceive the organization's readiness to adopt and integrate the e-office system for mail management?
    [ ] Highly ready [ ] Moderately ready [ ] Not ready [ ] I don't know

21. How do you assess the quality of ICT infrastructure for smooth performance of e-office in your organisation?
    [ ] Excellent [ ] Very Good [ ] Good [ ] Fair [ ] Poor [ ] Very poor

22. To what extent do you agree with awareness programmes taken by your organisation for implementation of the existing e-office system for mail management?
    [ ] Strongly agree [ ] Agree [ ] Disagree [ ] Strongly disagree

23. What additional organisational efforts have been provided to enforce e-office implementation in your organisation? *(You may tick more than one answer)*

[ ] Legal tools (laws and policy) to capture effective implementation of e-office

[ ] Internal guidelines and circulars / memo

[ ] Enhanced security on mails incorporated in the e-office system

[ ] Others (*please specify*)

24. How do you rate the adequacy of measures taken to enhance e-office system implementation for mail management in your organisation (*Rate the level of extent by putting a tick (☑) to respective answer: 1 =Very Adequate, 2 = Adequate, 3 = Inadequate, 4 = Very inadequate).*

SN	Category	Extent			
		1	2	3	4
1.	Availability of financial resources				
2.	Availability of records professionals skilled staff				
3.	Availability of ICT infrastructures				
4.	Availability of security measures				
5.	Availability of national policies and guidelines				
6.	Availability of internal guidelines and circulars				
7.	Training on e-office system and basic ICT skills				
8.	Adequacy technical support				
10.	Integration/data exchange of e-office system for mail management with other institutions				

i. Others (*please specify*)

SECTION D: Employee Perception in Implementing e-office System for Mail Management: *Please respond by putting a tick (☑) to the appropriate answer*

26. How do you perceive the use of e-office system for mail management in your organisation?

[ ] Very simple [ ] Simple [ ] Complex [ ] Extremely complex

27. What is your level of satisfaction on the use of e-office system for mail management in your organisation?

[ ] Very satisfied [ ] Satisfied [ ] Neutral [ ] Dissatisfied

[ ] Extremely dissatisfied

28. To what extent do you agree with the functionality of the e-office system for mail management in your organisation?

[ ] Strongly agree [ ] Agree [ ] Neutral [ ] Disagree

[ ] Strongly disagree

29. How do you perceive the user friendliness of e-office system for mail management in your organisation?

[ ] Very friendly [ ] Friendly [ ] Neutral [ ] Unfriendly

[ ] Extremely unfriendly

30. (a) Honestly, which records management system do you prefer to use most? *(You may tick more than one answer)*

[ ] paper based system

[ ] electronic (e-office) system

[ ] Hybrid (both paper and electronic)

(b) Give reason(s) for your choice in 25 (a) above:

31. Do you promote the use of e-office in your department/ office?
[ ] Yes [ ] No [ ] I don't know

SECTION E: Impediments in implementing e-office System for Mail Management: *Please respond by putting a tick (☑)to the appropriate answer*

32. To what extent do you agree on the following factors affecting the effective implementation of e-office in your organisation? *Rate the level of challenges by putting a tick (☑) to respective answer (1 =Strongly Agree, 2 = Agree, 3 = Neutral; 4= Disagree, 5 = Strongly Disagree).*

SN	Description	Extent of challenge				
		1	2	3	4	5
1.	Inadequate change management strategy for end-users to accept change					
2.	Organisation budgetary constraints					
3.	Resistance among employees					
4.	Inadequate skilled and knowledgeable staffs					
5.	Negative attitudes towards use of computers and technophobia					
6.	Organisation culture and bureaucracy					
7.	User friendliness of the e-office system					

SN	Description	Extent of challenge				
		1	2	3	4	5
8.	Duplication of documents received electronically and manually					
9.	e-office is not a platform for performing my specialized duties					
10.	Absence of electronic records management policy and facilities to execute e-office					
11.	Unstable internet services, the e-office system is slow and often go down					
12.	Difficult to get immediate technical assistance support when one requires help Compared to the previous manual process					
13.	Inadequate IT resources such as computers, scanners and printers					
14.	Some e-office mails are deleted from servers before being archived					

i. Others (*please specify*)

34. Kindly give any other suggestions that can be useful for effective implementation of e-office system for mail management in the public service.

Thank You for Participating

Appendix 2: Interview Guide for Heads of Departments and Units

The Tanzania Public Service College (TPSC) as per its establishment mandate is currently conducting a research on the topic "Exploring the effectiveness of implementing electronic office system for mail management from selected Tanzania public service institutions: success and challenges". Kindly help to answer the interview questions as candidly as possible. The College assures you that it will treat the information provided with highest confidentiality and integrity.

SECTION A: Achievements on the Use of e-office System for Mail Management in an Organisation

1. Are there any achievements in using e-office system for mail management in your organisation?
   a. *At what stage is the implementation of e-office system for mail management purposes attained in your organisation?*
   b. *Effectiveness of the e-office system for mail management in your institution?*
   c. *Facilities to support e-office system implementation in your organisation?*
   d. *Records managed e-office system? (classified, unclassified)*
2. What benefits have you achieved as an organisation in the use of e-office system for mail management?

SECTION B: Organizational capability in implementing e-office system for mail management

3. Does the organization have capacity to implement e-office for mail management?
   a. *For how long have you been using e-office system in managing records?*
   b. *How well can you operate/ use the e-office system in your organisation?*
   c. *How did you learn to use e-office system for mail management in your organisation?*
   d. *What awareness creation programmes taken by your organisation for implementation of the existing e-office system for mail management?*
4. What measures have been taken to enhance e-office system implementation for mail management in your organisation?

SECTION C: Employee Perception in Implementing e-office System for Mail Management

5. What is your perception in implementing e-office system for mail management?
   a. *Is the organization's ready to adopt and integrate the e-office system for mail management?*
   b. *Are you satisfied with the use of e-office system for mail management?*
   c. *Is e-office system useful and user friendly?*
   d. *Between paper based system traditional, electronic based and hybrid, which one do you prefer the most and why?*
   e. *How do you promote the use of e-office in your organisation?*

SECTION E: Impediments in implementing e-office System for Mail Management

6. What challenges hinder the effective implementation of e-office in your organisation? *Personal. Organisational, Social / cultural, Technological*

7. Kindly give any other suggestions that can be useful for improving the effective application on the implementation of e-office system for mail management in the public service.

Thank you very much

Appendix 3: Observation Checklist – Effective Implementation of e-office System for Mail Management in Public Organizations

1. Institutional Observed information
   a. Name of Ministry / Department/ Institution:
   b. Location of the MDA (*mention region and district*):

2. Observation Checklist

SN	Area of Observation	Compliance		Comments
		Yes	No	
1.	Achievements on the Use of e-office System for Mail Management in an Organisation			
	General ICT network infrastructure in the organisation*(LAN/WAN, Servers, Computers, Scanner, Printer)*			
	e-office system installed in the organisation?			
	Increased security and confidentiality of records and files*(CCTV cameras, doors, grills, fire detectors)*			
2.	Organizational capability in implementing e-office system for mail management:			
	Budget allocation for e-office system			
	Availability of national policies and guidelines			
	Availability of internal guidelines and circulars			
	Training schedules			
	Availability of staff for technical support			
	Availability of manuals and other guidelines for e-records and e-office			
3.	Impediments in implementing e-office System for Mail Management			
	Duplication of documents received electronically and manually			
	Internet stability			

Thanks

Appendix 4: OSHA Research Permit

UNITED REPUBLIC OF TANZANIA
PRIME MINISTER'S OFFICE
LABOUR, YOUTH, EMPLOYMENT AND PERSONS WITH DISABILITY
OCCUPATIONAL SAFETY AND HEALTH AUTHORITY

In reply please quote;
Ref No: AC.253/303/01/54 **Date:** 06/11/2024

Rector and Chief Executive Officer,
Tanzania Public Service College,
P.O.Box 2574,
DAR ES SALAAM

RE: OFFICIAL VISIT FOR COLLEGE RESEARCH ACTIVITY

Please refer to your letter with **Ref. No. *AC.384/356/01/66*** dated 28 October, 2024 with the subject mentioned above.

2. Basing on the importance of the said Research activity, I am pleased to inform you that, your request to conduct Research in area of electronic office systems for mail management in November – December has been accepted.

3. The Office will cooperate with you throughout the exercise.

4. Thank you for your cooperation.

For: CHIEF EXECUTIVE
OCCUPATIONAL SAFETY & HEALTH AUTHORITY

P. C. Zuberi
For: CHIEF EXECUTIVE

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